

Round-table Talk at Fuji Heavy Industries Ltd.

Where CSR Activities Oriented to the Local Community is and Where It is Going.



Become a Model Company Loved in the Communities

Linking CSR Activities and Actions of Each Employee for Local Contribution is Needed.

{ Moderator }

It is important for CSR activities to take the bottom-up approach on an individual level in addition to the top-down approach on an organizational level. We at Fuji Heavy Industries have put up the “Three Pillars” (environment, traffic safety and contribution to local communities) as the common areas for all employees to get involved continuously on an individual level. All manufacturing divisions and business units have been proceeding with systematic activities in each area. Today, I would like to hear from you any specific fruits of your efforts around the “three pillars” and issues to be followed through in future.

Toshiyuki Nishiyama

Utsunomiya
Manufacturing
Division General
Administration
Department
General
Administration
Section
Manager



Utsunomiya Manufacturing Division has put up a slogan “Company Loved in the Communities” for its vicinity to residential districts to nurture a sense of togetherness. For cohabitation with the communities, we have been expending all our energies to fully observe compliance, improve manners for traffic safety and address sincerely to any complaints. I believe that mutual trust built through such approaches comes before activities for the so-called local contribution are appreciated.

As to the programs for local contribution, we are involved in supporting school education in addition to taking initiatives in cleaning and some other events. We have started “delivery” classes called “How to Make an Airplane, Mechanism of Flying”.

We would like to involve employees and local communities in such programs taking advantage of the characteristics of the division, which could naturally lead to strengthening the business foundation in future.

Masahiro Mukai

Gunma
Manufacturing
Division General
Administration
Department
General
Administration
Section
Manager



At Gunma Manufacturing Division, a variety of activities, large and small, have already rooted as annual events. For example, such programs by “SUBARU Community Exchange Association” represented by friendship concerts, giving out flowers and cleaning of Mt. Kanayama, are rather large in scale with participation of 57 firms including suppliers. We also clean the vicinities of our plants once every month, thus steadily expanding the number and scope of such activities.

On the other hand, the organizational size of the division with 8,000 employees in the whole Gunma district, poses an issue of difference in the level of perception and motivation among individuals. Since the concept of CSR is broad, it requires to show clearly to the employees what Fuji Heavy Industries is doing and will do and have them be aware of their links to CSR, I think we need to evolve in stages, even if not rapid changeover.

Fuji Heavy Industries has been engaged in CSR since fiscal 2006 in three phases: grasping present situation and issues, sorting out activities and startup, and activity promotion, for systematic approaches.

In FY2008, we set up three pillars: “environment, traffic safety and contribution to local communities” as the group-common grounds of CSR activities to make each employee recognize CSR and its importance for serving the society as a corporate citizen. (Refer to P.26 of the detailed Web version of the Report.)

Today, we invited the people responsible for CSR promotion from the head office, Tokyo Office, Manufacturing Divisions of Gunma, Saitama and Utsunomiya to meet in one place, disclosing each other difficulties and new challenges they have faced and their aspiration in future CSR activities.

At Saitama Manufacturing Division, we have been involved in CSR voluntary programs such as traffic safety campaign for primary school children, local cleaning and cheering of sports clubs with the three pillars in mind. To push the activities, “Volunteer Point System” was set up to nurture the sense of participation by awarding people by organizational unit such as section. However, I feel it difficult to make employees understand deeply how their present “realistic actions” are linked with the “CSR Policy” which bears various corporate social responsibilities. I think we need to work out policies which allow them to understand just with one look the Company’s activities in the context of the concept of CSR of Fuji Heavy Industries. Ideally speaking, the CSR policies should be built up, being supported with down-to-earth activities along the three pillars. I would like to forge “CSR suited to Fuji Heavy Industries” deeply rooted in the minds of each of the employees.

In the case of Tokyo Office, it seems to me that its type of business presents an environment which makes it rather easy to make the people understand and put into practice CSR activities. Because, we understand that the development of vehicles with good environmental performance for customers by developing power units (engines and transmissions) is the most effective activity that leads to effective preservation of the global environment. Anyway, for local contribution by Tokyo Office, we are supporting education of primary school pupils through our office site tour program as one example. We also actually bring an electric vehicle to schools to assist their social education classes. CSR is to me the involvement in building a sustainable future together with the society so that a corporate could continue to grow. I have renewed my determination to work hard to establish activities for contribution to the society through our main line of business.

At the head office, there is no direct element which impacts the environment since large facilities associated with our manufacturing divisions are handled. But, as the business of the office has great impacts on the whole company organization, dealerships and affiliated firms, we are promoting environment-related activities tinged with CSR. Each department has assessed the CSR impact of its line of business on the society and identified high-impact issues. Based on such groundwork, there are many improvement programs going on now, which affect SUBARU product planning, marketing, sales and other corporate business. As for programs for local contribution, CSR activities which reflect the characteristics of the head office are unfolding in the vicinity, including coordinated cleaning for road beautification in Shinjyuku Ward and donation of vaccines through collection and recycling of caps of PET bottles.

Kazuhiko Suzuki

Saitama Manufacturing Division General Administration Department General Administration Section Manager



Hiroshi Sasahara

CSR and Environmental Affairs Promotion Department (Tokyo Office)



Tsukasa Shinohara

CSR and Environmental Affairs Promotion Department (Head Office)



Company Policies Built Up through Down-to-earth Activities

Establish Activities for Contribution to the Society through Our Main Line of Business,

Aim at Infiltration of CSR Activities which Reflect the Characteristics of the Head Office.

With Aspiration to Promote Further CSR Activities



Tatsuya Suzuki
CSR and Environmental Affairs Promotion Department Manager

To Be a Company, Indispensable in Local Communities Through Group-wide Cooperation of Fuji Heavy Industries

Now, I can see clearly through this round-table talk that activities around the “three pillars” have taken root at each manufacturing Company, but at the same time, I also can see an issue that people still are not aware of linking such activities to the main line of business or “something only Fuji Heavy Industries can do”. To tackle with such issue, we have revised the CSR Policy and clearly indicated the defensive side of CSR (focused on observance of the Corporate Code of Conduct and other vital items including compliance) and the offensive side of CSR (focused on contribution to solving social issues as a corporate citizen through business activities). Moreover, we should show clear-cut goals and take down-to-earth actions. Establishing a group-oriented management system in cooperation with affiliates in and outside Japan is also an issue at hand for action under the new CSR Policy. I want to turn our activities to be the ones which would make people in local communities think that we are a part of their communities and expect us to stay there. This is what we need to find our place in the society for decades to come.

Dealerships in Action

CSR in FUJI SUBARU Inc.

"SUBARU Diamond Award" is the annual commendation presented to the dealership who showed the most outstanding overall performance in financial health, sales record, local market share and assessment by customers, among others. FUJI SUBARU Inc. has received the awards for the past 34 years in a row. The secret behind this performance can be traced to the CSR activities unfolded by them.



To be a company loved and relied on by the communities

Every action is linked to our customers.

FUJI SUBARU Inc. boasts the highest level of automobile ownership in Gunma Prefecture and enjoys great backup from the local communities. It is just because we owe a lot to the people in the communities that we can get ourselves involved proactively in local contribution programs with heartfelt appreciation.

For example, as an environment beautification program, we have been cleaning nearby streets around the outlet facilities once every month for the past 30 years. The program has made all the employees pay attention daily to trashes on streets to keep the surrounding areas clean.

Also, as an automotive dealership, we have been actively engaged in campaigns to eradicate traffic violations and accidents to the extent that 84 percent of our workforce have the SD Card^{*1}. Another example of our involvement is positive participation in voluntary "fund-raising with love" campaigns.

We are working hard being aware that such each and every action for local contribution is linked to our customers.

There is a line of commitment "Let's provide heart-touching services to customers" as one of the "Three Pledges" of FUJI SUBARU Inc.. We are the first to incorporate the

Hiroshi Saito

President,
FUJI SUBARU Inc.



idea, "Customer Comes First Policy" in Japan and have been treating customers with sincerity. Throughout these more than 60 years since the foundation, we have always been trying to question ourselves if our every action we take is really appreciated by our customers meeting their expectations.

In 1968, at the time of the era of our predecessor FUJI AUTO Inc..we staged a campaign with then all employees wearing a patch which said "Remind me if anything wrong". Our salaries basically come from customers who buy our products, which was appreciated by the attitude of "remind me if something left unattended". That is where our sales activities and services start from and indicates how deeply our "Customer comes first" policy is rooted.

How Quickly Can We See Things from the Customers' Vantage Point?

We need to know how they think of us before giving serious consideration to customers. In this context, SUBARU has forums called "SCRUM Meeting" for exchange of information. We are making effective use of the forums. At these meetings, our head office is absorbing the good and the bad to share through discussions by on-site employees of all the sales outlets. Through the review of our way of handling customers are sorted out practices to be followed, while any complaints are addressed by modifying our way as needed for prevention of recurrence. What we most care is the speed of action. Respond to phone calls from customers right away, attend quickly to problems whenever customers face, and rush to the scene of a traffic accident involving a customer. We believe that thorough implementation of such immediately obvious things is the vital key to improving CS (Customer Satisfaction) and making the "Customer comes first" policy live up to their expectation.

^{*1} SD card stands for a "Safe Driver card" which proves non- traffic violations and accidents continuously.

Three Pledges of FUJI SUBARU

1. Let's provide heart-touching services to customers
2. Practice quickly with one's head, hands and feet
3. Live faithfully with care of one's health

To appreciate local communities leads us to appreciate customers

What makes us always conscious of CS comes from keeping ourselves appreciative to local communities. I think that just being conscious of local contribution and specific actions as mentioned before would lead us to be mindful of customers or CS. CS improvement also could lead to improvement of sales performance. If you think of customers before your very eyes seriously, you will naturally be trusted and given credit by them.

We do business deeply rooted in Gunma Prefecture and its

size keeps gradually expanding. There is no end in CSR activities. We will keep ourselves committed to local contribution along with to our own business to be a company loved and relied on by the communities and stay to be locally the No.1 company in years to come.

Dealership in FUJI SUBARU's Ota shop



Kijyuro Kojima

Managing Director and
Ota branch Office President
FUJI SUBARU Inc.

Enhancing in-house communication link to the better CS

Our shop has been working to enhance in-house communication. Unless you have good coordination inside, you cannot send good messages to customers. In this sense, we set up an all-hands committee for better communication.

At the "SUBARU Standard Committee meeting" for more frequent contacts with customers, we discuss such topics as why customers do not bring their cars in for after-delivery inspections and what kinds of approaches should be taken to encourage their coming back. We also have study meetings to deepen our knowledge on the industry and learn how to treat customers better.

At the "Showroom Committee", we discuss measures to receive, send off and listen to customers to serve them better. Active involvement of female staff is eye-catching. Say, for example, our drink menu has fairly good reputation by customers for being easy to understand and

make an order. Now, we can see from the menu on a table that some business talks are going on, which allows us to treat customer smoothly. You will also notice their careful feminine consideration to details from the way magazines for leisure reading while waiting and baskets for belongings under the seat are arranged. The in-house communication has been revitalized through discussions at these committees on a regular basis. I understand that CS is measured by how much employees feel appreciative to customers. Such appreciation to customers comes only from our appreciation to the surroundings. At the Ota Shop today, the climate to respect others and appreciate things no matter how small they are, has begun to settle. Without becoming complacent about the current status, we will be responsive to meeting the needs of customers through further use of such committees.



Female staff's careful consideration to details supports the CSR improvement of Ota shop



Above : Free Massage chairs
Below : Kids corner for the customers with children



Maintaining in a good condition with the heart of "Every staff has same mind as Sales, Front staff, and Mechanics"

SUBARU's "Approaches to Prevention of Global Warming" Efforts in Product Development

Global warming, CO₂ reduction, disruption of nature, these words are now almost daily in the mass media and on internet. The environmental problems have been regarded as issues of importance anywhere in the world. SUBARU has been tackling with the global warming issue for its prevention in every process from planning, production, logistics, etc. of environment-friendly products. The following show some of our efforts.

Through Aiming at the Harmony with Car Society and Rich Global Environment



"Plug-in STELLA"

Development of an electric vehicle

Product planning conscious of the harmony with the environment is widely needed to use limited resources with care so that automobiles can help enrich people's lives over many years to come. As a car manufacture, we take it the due responsibilities of SUBARU to give consideration to the global environment. Next follows the introduction of successful development of an electric car "R1e" and our involvement in putting the "Plug-in STELLA" in practical use.

A Clue of Developing an Electric vehicle and the Missions of SUBARU.

In the midst of much attention paid to low fuel-consuming and exhaust-gas emitting eco cars, SUBARU in its quest for combining "pleasant and dependable new driving performance with the global environment", came to think of development of electric vehicles as products meeting the needs of the times for their care to the global environment and practicality. Needless to say, zero emission of carbon dioxide while moving, even with the use of "well-to-wheel" (from drilling for oil to its consumption for drives) energy including power generation at a power station taken into account, their carbon dioxide emission is less than that of fuel-cell vehicles which consume gasoline, diesel oil and hydrogen gas. Meeting technological challenges with the focus on the future, creating the charm and value of SUBARU's own and making proposals on one hand, while putting really useful electric vehicles in practice by striking

a balance between vehicle's utilities and preserving the rich global environment and resources on the other, are the missions and the responsibilities of SUBARU.

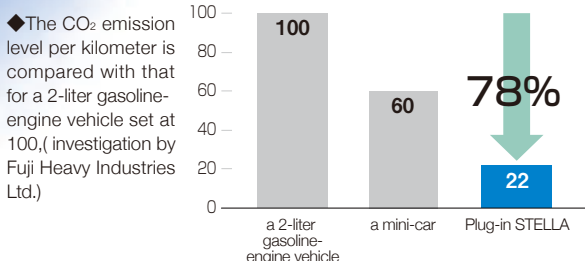
Environmental Performance of Plug-in STELLA Greenhouse Gas Emissions Significantly Reduced

The R1e is a vehicle developed looking ahead to full-fledged popularization of electric vehicles. Tokyo Electric Power Company, its joint development partner, started operating a fleet of 10 R1es for business use from June, 2006, increasing its number by 30 units to 40 units in 2007 and verified the performance as a short-distance commuter satisfactory for daily operations. Credit given to the develop-



Preceding electric vehicle "R1e"

ment of the R1e, the model received “the 2006 Environment Minister’s Award for Activities to Fight Global Warming”. In July, 2008, a new concept electric model “Plug-in STELLA Concept” was announced with utilities further improved exploiting the achievements and know-how up to that time and eyeing its commercialization. No carbon dioxide is emitted while in motion.



Efficient Running with Minimized Energy Loss

Generally speaking, in the development of an electric vehicle, the increase of the number of mounted batteries for longer cruising distance (distance you can travel per one charging) may result in longer charging time and energy loss due to the batteries’ own weight. The practicality-conscious “Plug-in STELLA” can store much energy with less number of batteries and allows charge and discharge with great current, realizing necessary and sufficient travel distance as well as short charging time. Assuming business use in cities, the travel distance with the fully charge batteries was set at approx. 90 km (by 10-15 mode). If charged with a quick charger, 80% charging will be completed in about 15 minutes. The high energy efficiency will lower the fuel cost to about 2/5 of that for a mini gasoline-engine vehicle or even further down to about 1/5 if midnight price rate is used.

Moreover, while motion energy is dissipated in the form of friction heat in conventional vehicles, the Plug-in



Quick charger



Charging image

STELLA has a regenerative braking system for active and effective use of motion energy. This system will convert motion energy into electric energy by making the motor work as an alternator in deceleration for recharging the batteries.



*“L range” which applies the regenerative braking system

◆Charging time

		Charging time
	Quick charger (DC400V-50kW)	About 15 minutes (80% charging)
	Charge at home	200V(15A)
100V(15A)		About 8 hours (100% charging)

Toward Practical Application

In April, 2009, the “Plug-in STELLA Prototype” was developed at the last phase for market introduction. Based on the Action Plan for Achieving a Low-carbon Society (Cabinet decision July, 2008), we provided 15 prototypes of this model as subject vehicles in the promotion program to Introduce next-generation vehicles for popularization and expansion of electric vehicles. The following numbers were the ones of the prototypes loaned to prefectural governments and others for use by car-sharing until June, 2009: 4 units to Kanagawa, 3 units each to Aichi, Osaka and Hyogo Prefectures, 1 unit each to Yokohama City and Japan Post Service Co., Ltd..

The Plug-in STELLA Prototype has its motor output upped from 40 kW of the preceding concept model to 47 kW for better driving performance along with enhanced practicality for introduction to the market. In this fiscal year, about 170 units in total are planned to be loaned to corporations and municipalities. The development of electric vehicles at SUBARU will be pushed forward through accumulation of data of log-term verification tests with the goal set to make both a rich car society and global environment come true.



Refer to our website as for the other efficiencies.
<http://www.fhi.co.jp/envi/plugin/index.html>
 [Japanese only]



“Plug-in STELLA”
At the Lake TOYA Summit

SUBARU Electric Vehicles in Action

In June, 2008, the preceding model “R1e” of the “Plug-in STELLA Concept cars” gave it a challenge to travel a distance of 858.7 km from Tokyo to Lake Toya in Hokkaido in the “EV(Electric Vehicle) Caravan”¹, ahead of the opening of Lake Toya Summit. The electricity bill for this caravan travel was 1,713 yen, proving the excellent economy of electric vehicles. In July, 2008, at Lake Toya Summit, the “Plug-in STELLA Concept cars” were used for transportation of Summit participants and collection/delivery of mail articles among local post offices in the Lake Toya region during the summit meetings. Furthermore, after the Summit, these vehicles have been in use as mail collection/delivery vehicles in Yokohama for verification tests.

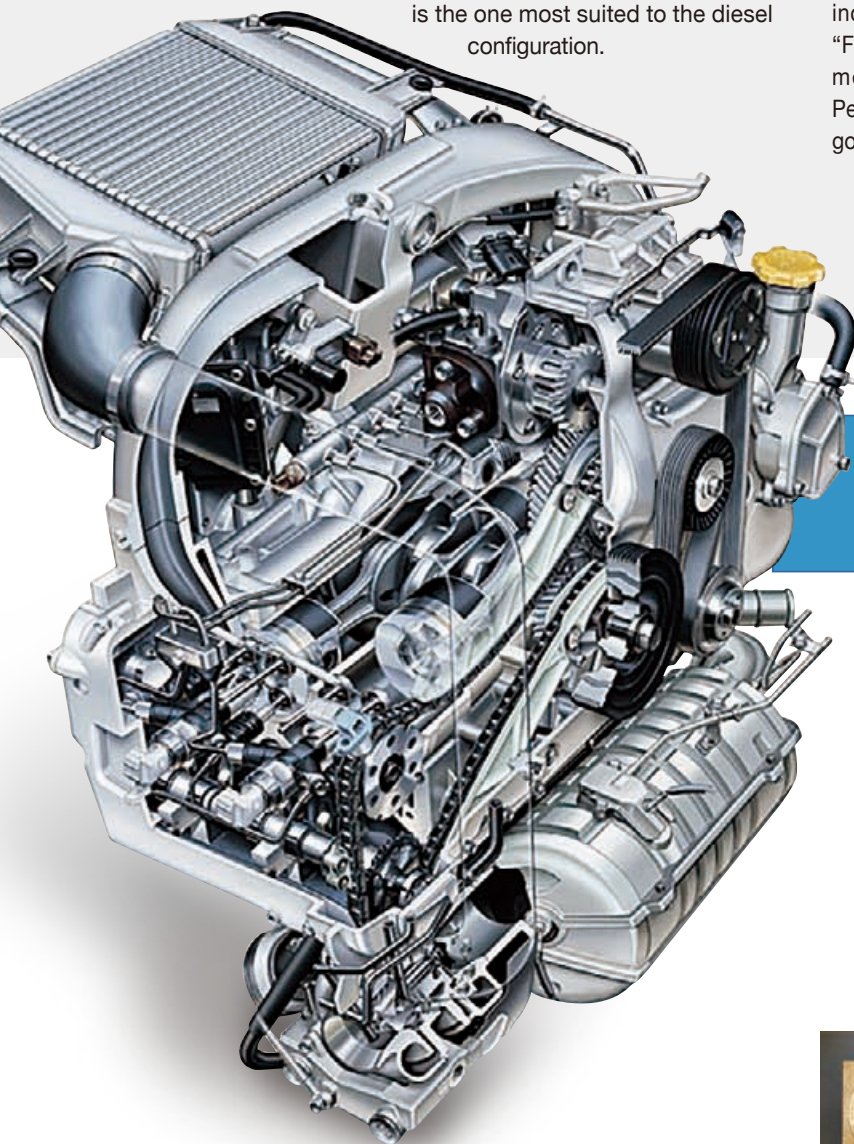
¹ EV(Electric Vehicle) Caravan which is sponsored by Japan EV Club.
 Authority: Japan EV club HP

The Grate Progress to "Environment-Friendly Drive". The introduction of the world-fast passenger cars with a diesel-powered boxer engine

Independent development of a diesel-powered boxer engine

In order to cope with global warming, the improvement of fuel economy is much required world-wide. Particularly in Europe, the introduction of CO₂ tax systems introduced one after another in EU member countries has accelerated the demand for diesel cars. In 2005, the market scene changed with diesel vehicles taking about half of the total new car sales.

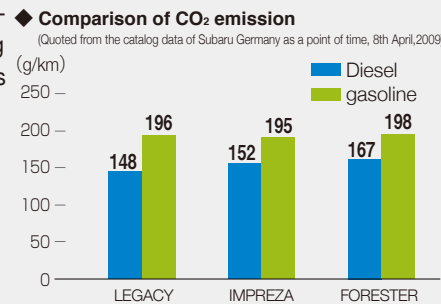
With Europe positioned as one of our strategic markets, we concluded that we could not compete without diesel-powered cars and in the autumn of 2005, the introduction of diesel cars was decided. SUBARU, thus being the last comer in the diesel market, embarked on independent development of the world-fast passenger cars with a diesel-powered boxer engine in the belief that the horizontally opposed engine with the innate low vibration, low center of gravity and high rigidity is the one most suited to the diesel configuration.



Fusion of Environment and Driving Performance

The most attractive feature of a diesel engine is its less fuel consumption with low CO₂ emission as compared with a gasoline engine. For instance, the Legacy 2.0D is capable to run about 1,000 km with one supply of 64-liter gasoline. In Europe, where the diesel's share is high, SUBARU cars with the boxer diesel engine enjoy a high reputation for good fuel economy. The boxer diesel engine does not need any balancer shafts to offset vibration since the vibration caused by the piston movements is originally quite limited due to its mechanism. This has made a compact engine with both good fuel economy and excellent response a reality.

In the development and production, we have already been involved in expanding the line of diesel-powered models and markets, preparation for more stringent emission regulations, cost reduction and other future issues. While the hurdle to clear is increasing higher year after year, the pursuit by SUBARU for "Fusion of Environment and Driving Performance" keeps going.



" Diesel engine"

It has same process as gasoline engine in producing power by burning light oil as fuel, but the construction of burning is different. Low fuel expenses and low CO₂ emission is the strong points of Diesel engine.

① Low fuel expenses

It gives fuel efficiency 15 to 20% better than a gasoline engine. With compression ration set high without abnormal ignition, more energy can be extracted from fuel and the energy can be used more efficiently as waste move of intake air is limited.

② Low emission gas

The high thermal efficiency contributes to low CO₂ emission and significant improvement in technologies for precise control of fuel injections and purification of emission gasses. Much progress is made in suppressing the generation of soot-causing substances.

③ Low vibration and noise

In general, while a diesel engine in general produces higher torque due to the high explosive compression in combustion than a gasoline engine, it is prone to make vibration and noise worse. But, the horizontally-oppose layout of pistons unique to the boxer diesel minimizes vibration and noise due to the piston's reciprocating movement.

Our horizontally opposed diesel engine was presented with the Japan Society for the Promotion of Machine Industry Chairman Award in the 6th Prize for Promoting Machine Industry^{*1}. High marks were given to the fact that it was the first horizontally opposed diesel engine applied to production cars and responded to the needs in the European market in many respects for low vibration and noise, environment performance and driving fun.



^{*1} The Prize for Promoting New Machine Industry : Excellent studies and developments related to promoting machine Industry are honored by the Japan Society for the Promotion of Machine Industry Foundation.

Wind Turbine Generator System Producing Clean Energy

Development of the Wind Turbine Generator System suitable for the unique environment in Japan

Reduction of greenhouse gases which cause global warming is much needed. Japan dependant on imports for most of its energy needs has to act expeditiously for realization of a low carbon society. In this connection, much attention is paid to the utilization of renewable natural energy by expanding wind power generation as the most leading example.

However, there are many issues to be solved in the wind power generation. How to deal with the unstable power generation due to ever-changing wind and punishing natural phenomena rather unique to Japan such as frequent typhoons, lightning strikes and earthquakes. A large-scale stable and efficient wind power generation system overcoming such issues and suited to the unique environment in Japan was much expected. We responded to such expectation by developing a large wind power generation system which features downwind method with the free-yaw effect.



Large-Scale Wind Turbine System
"SUBARU 80/2.0"

SUBARU is proud of own results and will continue to contribute to solve the Global Environmental issue with their technical developments.

SUBARU delivered 15 units of the 40kW-class wind power generation system SUBARU 15/40 and 5 units of 100kW-class SUBARU 22/100 and 2 units of 2,000kW-class SUBARU 80/2.0 by FY2007. In the meantime, in January, 2002, a SUBARU's compact wind power generation system was lauded with "the 6th New Energy Award" and in November, 2007, the large-scale wind power generation system was credited with the Director-General of the Agency for Natural Resources and Energy Prize of "the 11th New Energy Award". Winning these awards show high commendation for unique technologies as represented by the downwind method.

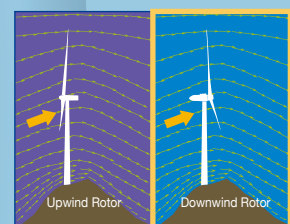
In FY2009 one unit of the 40kW-class wind power generation system and several units of the 2,000kW-class wind power generation system are scheduled to be delivered.

SUBARU will continue to strive to disseminate the wind power generation through our own involvement and relentlessly meeting challenges undaunted for solution of global warming.

Characteristics of Our Large-size Wind Turbine System

[Adoption of downwind roto]

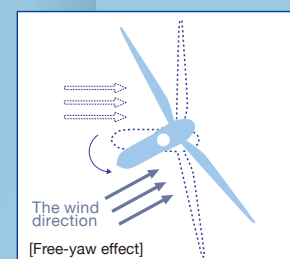
The downwind method is the type of downwind rotor to absorb wind power efficiently with wind off topographical configurations. In general, the rotor is directed upwind, but SUBARU adopted the downwind rotor method in order to make the Wind Turbine System suitable for the Japan's topographical configurations like mountains and hills.



A Wind Turbine Suitable for Japanese topographical configurations

[Free-yaw effect]

A downwind turbine has the free-yaw effect which works to direct the rotor downwind naturally like a case of weathercock. When hit by storms, it can pass off wind naturally, and safety is assured.



Pleasant and Dependable, it's New SUBARU's driving.

What SUBARU's 7 seater, "EXIGA", has aimed at



SUBARU has made efforts for developing new car, like LEGACY, IMPREZA, FORESTER, fitted the market trend and customers' needs at the times. The new EXIGA also has brought the "interior environment" of its own into reality with the environment and safety performances retained as a "SUBARU-like multi-passenger car" which was much voiced not only by the market and customers, but also by our staff inside.

➤ "7-seater panorama touring" has brought about new possibilities in the performance of Safety, Environmentally friendliness, and driving.

The Fusion of interior environment and Driving performance

The domestic market of the diversifying multi-passenger car category has expanded to take about 25 percent of the market. Of course, we heard voices from the market and customers for a multi-passenger car also from SUBARU. Responding to such calls, we started the development of a multi-passenger car which asserts the SUBARU identity to appeal to as many potential customers as possible.

The SUBARU's main characteristic is its driving performance excellent in weight balance attributable to the horizontally opposed engine [SUBARU BOXER]. The low gravity and compact size of the engine are what embody stable and sporty running. As a result of placing an emphasis on having both such running performance and pleasant interior without losing the SUBARU's identity, the development concept "7-seater panorama touring" was born. It is the car which offers a relaxing interior for all passengers to enjoy conversation and passing scenery and is easy for anyone to drive with good running performance. We focused on creating a car which

allows "good communication among the passengers in the front, second and third seats "and, among others, "making driving itself felt as fun".

Generally, the interior of a multi-passenger car which we aimed to achieve and the running performance are not compatible, A boxy and tall profile will give an efficient design, but it leads to a higher center of gravity, sacrificing stability and controllability typical of SUBARU cars. To evade such contradiction, we adopted the "theater-seat layout" that arranges the seat rows to be stepped up from the first to the third seats like the ones in a movie theater, With such seat arrangement, you can enjoy refreshing panoramic views 360-degree around in any seat.

Technically speaking, the adoption of the SI-chassis¹ with a newly developed suspension system allowed us to have all steering, seating comfort and s making the interior of the model stand apart from other conventional 7-seaters.



Akira Sasaki
SUBARU products
planning department
Manager

Mamoru Kagawa
SUBARU technical head office,
General Research and
Experimentation department
Manager

Hiroya Ookumo

(at present post: General Manager of HEV Development Department)

SUBARU products planning
department Project
General Manager (at that time)

Top-level Safety Performance to Make Any Passenger Feel Safe

Needless to say, it takes more than mere pleasant drive. Unless we pay attention to the safety, making a 7-seater means nothing for SUBARU. We believe that mastering such fundamental performances as “run, turn and stop” to the limits paves the way to safety.

One thing worth mentioning is the active safety which is the safety performance to avoid collision. Refining the driving performance of a vehicle to prevent driving mistakes and avoid unexpected danger will lead to such features as “pleasant and untiring” and “concentration undistracted”. We successfully realized good driving stability and tractable steering with the horizontally opposed [SUBARU BOXER] engine, Symmetrical AWD and SI-chassis all in one package. Working together with the brake system, the active safety system enhanced the level of danger avoidance performance in case of emergency.

The field-of-vision design gives open view to improve the vehicle safety. The front pillars and door mirrors are optimally positioned not to obstruct vision when turning to the left or right. Also, in order to secure rear view, the rear window and the seats were devised for optimal size and profile. At present, the EXIGA offers the best field of view in the SUBARU lineup.

Another thing worth mentioning is the passive safety which is the safety performance to protect the passengers from impact in case of collision. Last year, the IMPREZA won Grand Prix in the “Japan New Car Assessment” which evaluates the overall safety performance of automobiles. This year, the EXIGA won Excellence Award. Credits were given to the frame structure employed for good impact absorption like the IMPREZA, the horizontally-opposed engine [SUBARU BOXER] effective against frontal impact and the curtain airbags which we were particular about details to protect the head of a passenger in any newly developed seat in the front, second and the third rows. It is indeed a good honor that our efforts in safety were acknowledged.

Pursuing the higher Driving Performance of SUBARU Leads to the Consideration of the Global Environment

For a company which makes vehicles, care for the global environment is the absolute requirement. We worked hard on the EXIGA for powerful running performance, good fuel economy and low exhaust emissions without tradeoff among them. The employment of “an electrically controlled power steering system” made the model ranked among the best in the class in fuel economy. The model can enjoy the benefits of the automobile green taxation plan since it meets the emission gas standard and the fuel consumption standard requirements across the board of grades. This good fuel economy can also be traced to the efforts for weight saving by reviewing each and every part down to earth from the viewpoint of strength and structural composition.

Fuel consumption also changes depending on how much you are conscious of it while driving. The EXIGA are provided with various devices such as the “ECO Gauge”^{*2} which is a measure for economical driving, the “SI-Drive”^{*3} with which the driving mode can be switched to meet driving situations and the “Info-ECO Mode”^{*4} which enables switching to the fuel efficient ECO Mode with a button, all designed to help customers being mindful of fuel economy.

No Limit in pursuing the Pleasure, Safety and Environmental Responsibility

Our commitment to and enthusiasm about the development of the EXIGA have borne fruit in the form of receiving “MOST FUN” Award, a special award of the Japanese Car of the Year in November, 2008. Behind this award is the high assessment by jurors for the design which makes all the passengers including those in the second- and third-row seats share the fun of driving, which was rather difficult realize on 7-seat cars. This is the award most coveted by and pleasing for us as the developer.

The very safe and pleasant environment available at hand makes us feel like taking the car out for a drive to come across with new discoveries outside. The EXIGA is packed with things that make driving a fun. If people go out with their families more often, taking advantage of the reduced expressway tolls effective from April, 2009, they will be able to appreciate the good of the EXIGA. We in the development division will keep pursuing as before for more fun, safety and evolution of the EXIGA.



We focused on creating a car which allows the high performance for environment and safety, and among others, “making driving itself felt as fun”.



▲ The horizontally opposed engine [SUBARU BOXER] are realized not only the excellent driving performance in weight balance attributable but also the safe structure which is easy to drop an engine under the cabin in case of front crash.



▲ Large glass area and seat layout provide the refreshing open space for every passengers.

◀ Large opening doors allow every passengers to enter the third seats smoothly.

*1 SI-chassis :
The unique Chassis of SUBARU integrated the seating comfort with the high driving performance.

*2 ECO Gauge :
A meter which indicates an economic driving condition to the driver.

*3 SI-Drive :
The three models provided are selectable with a flick of a switch to allow drivers to run as they like or suitable for driving scenes.

*4 Info-ECO mode :
It is an AT mode which improves fuel economy through various controls. The eco-lamp comes on when driving in a fuel efficient condition.



Toward the World and Local communication

The Relation between Industrial Products Company and Society

Industrial Products Company globally makes contributions through shipping more than 1 million units of “Robin”-brand general-purpose engines and products mounted with Robin engines annually. Meanwhile, it expends efforts for social contributions, placing importance on its relationships with local communities as a corporate based in Saitama Prefecture.

▣ The social contributions through the own business

➤ “Robin Engine” supporting the Human lifelines in the world

The flourishing scenes of Robin engines in action are no limited to inside Japan, but they can be seen in any part of the world, in the scorching hot, freezing cold, deserts, on the water, under diversified conditions of use. In fact, they are the engines which have consistently been supporting the lives of peoples.

Giving some examples of their forms of support, they serve as an indispensable lifeline in the agriculture and fishery and as means of transportation and power generation. They also serve as leisure equipment as rally carts competing in deserts. They are found on construction equipment such as rammer*1 and plate*2 for their unparalleled durability. They must be durable enough and easy to maintain as there are expected to be used under diversified conditions. In other words, high quality is needed to serve people in their lives naturally anytime and anywhere.

Our engineers go out to see customers to hear directly their expectations before deciding specifications of products so that they can be used in most optimal conditions. Such process could get us close to what customers really want and lead to new discoveries by knowing how the engine are mounted and the environments under which the equipment is used, The information collected this way is very important in daily activities for improvements and new product development.

Also, harsh testing

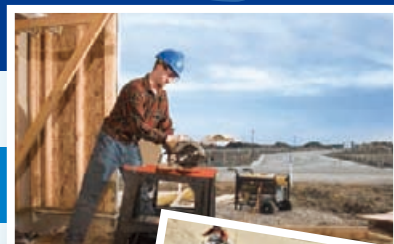
Keiichi Kakizaki

Technical department
Development section
Manager



Trough the adoption of EH72FI, the electronic fuel injection system (FI system), we could accomplish a higher performance model of the V-twin engine.

- While realizing high output by increasing the intake air volume, the fuel supply system was optimized to meet changing engine revolution and load to save annually about 500 liters of fuel.
- The fuel injection system was designed for optimal fuel supply by detecting changes in engine revolution and load.
- The most suitable fuel supply for the pressure of atmosphere was realized.
- The level of fuel emissions realized much lower than the level of the CARB tier III regulation*3



[Widely used all over the world]

- Has much durability toward the vibration and dust under construction
- The excellent emissions performance fit for leisure sports is appreciated all over the world.
- Supporting the lives of people living in no-electricity area
- The snow – removing machine is necessary for heavy snow area.

using real equipment and devices is an essential part of our business. We have test rooms exclusively designed to test rammers and plates.

As a result of constantly responding to the customers’ needs over the past 30 years, we now have an ample lineup of more than 2,000 different specifications. The record of sustaining the peoples’ lives is behind the trust in us today.

The business is always in the supply of power sources which make “the lives of customers anywhere in the world more convenient, richer and more pleasant”



*1 Rammer :
A press machine for construction site, especially used for small pavement.

*2 Plate :
A press machine for construction site as same as Rammer, but mainly used for Finishing touches of pavement.

*3 the CARB tier III regulation :
One of the severest regulation for exhaust gas in small general purpose engines under the jurisdiction of California Air Resources Board and this is the Third level of the regulation.
CO:549g/kW-h, HC + NOx:8.0g/kW-h, for engines over 225cc.



■ The Social Contributions through the Communication with Local Community.

Expanding the Social Contribution activities as a company operates in the area.

At Saitama Manufacturing Division, we have been involved in cleaning the surroundings of the plant for about 5 years under the “Fresh-clean Kitamoto, Leave It to Us” program. In addition, volunteer employees stand on road everyday to serve as crossing guards for children commuting to their schools.

To bolster such activities, we introduced a volunteer award system in September last year. Under the system, employees who took part in the volunteer program organized by the Division will be given points, and the sections with high score of points are awarded once in a year.

This has aroused interest division-wide in social contribution. As an example of the positive effects, we see employees picking up trashes voluntarily at bus stops. Also, in December last year, we received letters of thanks from children of Nakamaru Elementary School run by Kitamoto City for the crossing guard service by our employees. To make more people understand our down-to-earth activities so far, we are offering a plant tour program and study meetings with environmental preservation in mind.

In 2008, we were presented with an encouragement award in the “Saitama Corporate Award for Warm Care of Children” program. This is a program to award those companies and busi-

ness offices that are successful in creating working environments that allow child nursing and working without conflict. They gave us high marks for the good record of utilizing the child-care leave system, offering opportunities to junior high school students to learning through work-site experience and crossing guard service.

As a company which operates in Kitamoto City, we intend to continue helping the city and its communities prosper. In order to make a flourishing future come true, we will keep expanding the scope of our involvement.



The thank you letter from Elementary School children
Mitsuo Kurozu
 General Affairs department



Cleaning the surroundings of the plant



Crossing guard service

Voice

Mizuho Yoshida
 General Affairs department

Moved by Exchange of Warm Hearts

Last year, we were invited to the “Thank-you Meeting” hosted by the pupil association of Nakamaru Elementary School run by Kitamoto City. The meeting is designed to convey the gratitude of pupils through such invitation to people in the communities who support the school in such forms as farming and reading books and other activities. Children who noticed our presence spoke to us in smiles, saying “I always see you on the way. Thank you for what you do everyday for us.” Their innocent smiles and letters of thanks filled us with pleasant emotions.



Eco Plant Tours

Spreading zero emission activities trough the eco plant tours.



A Grinding sludge briquetting machine which has the both roles, one is wastes reduction and the other is making some profit.

As a part of our programs to serve the local communities, we are offering primary and junior high school students opportunities for eco plant tours.

Our Equipment Section is involved to boost interest in and understanding of the environment through the use of a grinding sludge briquetting machine. The grinding sludge is the steel dust generated during an engine grinding process. In the past, we had processed them as wastes spending some money for disposal, but taking advantage of the installation of the briquetting machine in July, 2007, we started processing the grinding sludge with high moisture content by compressing it for immobilization to be sold as raw material of reinforcement. The grinding sludge weighing about almost

100 tons annually before this changeover were reduced to 58.8 tons in 2008 and then drastically down to 5.1 tons in 2009. This is a specific success from the viewpoint of resource recycling and wastes reduction, or zero emission activities, with an extra benefit of helping the company make some profit.

From now on, we will step up efforts to reduce the other major industrial wastes of Saitama Manufacturing Division, which is wastes liquid including wastes oil. I believe that, always being conscious of turning into a clean plant with minimum of wastes discharge and energy use, living in harmony with the communities is our mission.



Eiji Sekine
 Industrial Technology
 Department Equipment
 section Manager



Katsutoshi Nagashima
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 Building and repairs subsection chief