

## Minami Daito Island and the Sugar Cane Industry

Minami Daito was uninhabited until the 20th century, when 23 colonists from Hachijo Island in the Izu Islands chain arrived in 1900. Their aim was to cultivate sugar cane and establish the sugar industry here. Minami Daito's coastline is almost entirely made up of imposing cliffs, which had obstructed all attempts to develop the fishing industry on the island, since it was impossible to directly berth a vessel there. Furthermore, the hard

ground of the island meant that it was not ideally suited to farming. It also lay in the path of the fierce typhoons that pass through the region from time to time. As if that were not enough, major seasonal fluctuations in rainfall meant that it was extremely difficult to secure a stable supply of water for agriculture. It was perhaps therefore inevitable that sugar cane, given its robust resistance to strong winds and water shortages, would become the basis for industry and the livelihoods of the people.

Daito Seito Co., Ltd., established on Minami Daito in 1950 is the island's only sugar manufacturing company.

- High cost of maintaining engine and tracks Although the island has a circumference of 21km, the railway had a total length of
- Difficulty in loading/ unloading

#### 1980s onwards

Harvesting using a harvester vehicle and trucks



▲ People interviewed for this feature (from left): Kiyohide Okiyama (JA Okinawa), Chikatoshi Okiyama, Kazunobu Aragaki, Shoichi Kumada (Daito Seito Co., Ltd.)

大東糖業(株)

For the islanders, sugar cane is the only industry that protects their continued livelihood; if it were to disappear then the island itself would lose its value as a place for habitation. Protecting the sugar cane industry is therefore essential for keeping the island functioning as a home for its people and also, in a sense, for maintaining a presence for Japan on the island.

#### **Contributing to Improving Sugar Cane Productivity**

It is necessary to ensure sustainability in order to further develop the sugar cane industry on Minami Daito, and for this to be achieved, the critical point is to improve productivity. For the islanders the perennial challenge is to realize greater efficiency in harvesting and transportation. For many years a light railway known as the "sugar train" was used to transport sugar cane on the island. However, growing maintenance costs for the railway engine and tracks meant that the islanders gradually shifted to using trucks; the railway was completely dismantled in 1983. Currently the method considered to be the most efficient is to have trucks run alongside a large harvester to collect and transport the

In 1998, the Hino Motors sales company Okinawa Hino Motors, Ltd., submitted a proposal to provide a specially customized "Ranger FT" \* truck for harvesting to Daito Seito, which was searching for a more efficient way to transport sugar cane. The company purchased 31 of these FT Trucks. At the time this was a completely new venture for Okinawa Hino Motors, but the order was successfully won by listening carefully to the concerns of both Daito Seito and the local farmers.

Harvesting sugar cane presents a variety of unique challenges: (1) the need to ensure that tire width matches the ridges in the field, as trucks need to directly enter the field to run alongside the harvester; (2) the importance of boosting the height of the chassis so that it does not damage ridges in the field; (3) ensuring that trucks can easily run at the same speed as the harvester; and (4) ensuring consistent traction and passability on uneven surfaces. Okinawa Hino Motors has worked consistently with the people of Minami Daito to resolve each of these and other challenges.

The original trucks that were purchased by Daito Seito are still in use today thanks to careful and attentive maintenance.

#### **Customer Requests and Hino Responses**

#### Customer requests cane harvesting

Need for good performance in

uneven fields



Need to be able to drive without damaging ridges in fields



Need a vehicle with high maneuverability



Need to increase payload and boost efficiency

### Hino Motors' response to customer requests

#### Challenge Solutions

Traction and passability is an issue when using trucks that are normall used only on payed roa Possibility of damage

to ridges with

specifications

standard vehicle

Need to further

improve turning

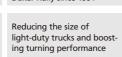
Need to further

performance



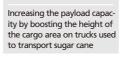






Using four-wheel drive

makes smooth driving



• Even when reducing the size of light-duty trucks, their payload capacity has been boosted to exceed that of current medium-duty trucks (2.3 t to 4 t).

#### 1990s



Medium-duty truck

# 2000s

Light-duty truck

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> Special Feature 1 Sharing in the Joys of Life on Minami Daito Island

Special Feature 2 Origins of "Total Support"

#### **Delivering Successor Vehicles for the Next Generation**

Since around 2006, new challenges related to improving productivity have been the focus. These included measures to reduce the turning circle of trucks in the sugar cane fields and also to boost the payload capacity, so that each truck could carry more sugar cane.

Okinawa Hino Motors focused on the challenge of improving sugar cane harvesting efficiency, identifying the customer's needs and worked in cooperation with Daito Seito and JA Okinawa through a two-year process of repeatedly testing new prototype vehicles and submitting proposals. In 2016, it was decided that Hino Motors trucks would be selected as the next-generation vehicles to add to the original fleet. Although the new vehicle does not have all the performance attributes of the FT trucks, through a process of customizing the standard specifications of the light-duty truck Dutro Melzz, it has been possible to boost transport efficiency by approximately 30%, which is what led to the decision to



▲ The immaculately maintained Dutro Melzz trucks of Daito Seito Co., Ltd.

adopt it as an appropriate next-generation vehicle.

The sight of Hino trucks being loaded with golden sugar cane and moving it to the sugar processing plant is a part and parcel of the daily scenery on Minami Daito from winter through spring. Aspiring to deliver on its slogan, "Trucks and Buses That Do More," Hino Motors will continue to contribute to the sustainable development of Minami Daito.

#### VOICE



#### Working to Ensure Sugar Remains the Key Industry for Another Century

Tatsuji Okiyama President and Representative Director Daito Seito Co., Ltd.

Hino Motors is an indispensable partner for the sugar cane industry on Minami Daito. When we first introduced Hino trucks I was still farming myself, so as someone well-acquainted with local conditions I made various requests. When we requested the replacement of the trucks in 2014, Hino Motors accurately grasped the challenges we face on the ground, with the result that they provided us with excellent trucks that fit the purpose. In recent years the number of young people working in the sugar cane industry on Minami Daito has remained stable, which is excellent news, and helps to maintain the island's vitality. I hope that Hino Motors will continue to support our business long into the future.

#### **Continuing to Provide Trucks That Support Island Life**

Right: Hirosuke Fukuzato President and Representative Director Okinawa Hino Motors, Ltd.

Left: Shigeo Higa Sales Division Manager, Deputy General Manager Sales Department, Member of



When Daito Seito was first considering the introduction of trucks to run alongside the sugar cane harvester, I met with Mr. Okiyama, who is now President of Daito Seito, but back then was still involved directly in sugar cane farming. I learned about the various challenges the farmers faced from him. We made various customizations in response to harvesting conditions, creating a vehicle based on our broad knowledge, including technology that was under development for use in the Dakar Rally at the time. We were overjoyed when our efforts paid off and we received the original order, which led to an ongoing relationship with the island. Although new successor trucks have also been introduced since, I am always deeply impressed to see the trucks from the original order still running smoothly, thanks to maintenance that keeps them looking just like new.

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<sup>\*</sup> Ranger FT: A four-wheel drive, medium-duty Hino Ranger truck.

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#### Field Mechanic System: Supporting **Customers' Businesses Worldwide**

In the 1960s, when Hino Motors started earnest efforts to expand overseas exports, it was European-made commercial vehicles such as trucks and buses that were dominant in overseas markets, with an enviable global reputation for durability and reliability. Although Hino Motors had already made a name for itself in Japan as a producer of diesel vehicles and trucks, in overseas markets the name Hino had little recognition, and the after-sales service structure was still not in place.

Despite these challenges, it was imperative for Hino Motors to achieve success overseas if it hoped to achieve further growth and development as a company. The strategy that was adopted was to strengthen after-sales service in overseas markets and enhance support structures for customers who had chosen a Hino product. The prevailing style of business in the commercial sector at the time was simply to sell vehicles, without any thought being given beyond the point of sale. It was against this backdrop that, in 1963, Hino Motors launched its Field Mechanic (FM) system as part of an effort to enhance after-sales service, with the aim of expanding overseas sales.

#### Fulfilling a Mission to Keep Customers' Operations on the Move

Field mechanics were dispatched from Japan and embedded in overseas locations to help further disseminate services and technologies, based on a desire to ensure that customers continue to use and choose Hino Motors' vehicles. The FM system was open for employees to apply for and featured a strong human resources development focus, with selected participants undergoing training to acquire the requisite language and technical maintenance skills before being dispatched overseas.

Given the vast range of climates and road conditions in countries overseas, it was no simple task to engage in vehicle management and maintenance that was appropriate for the environmental conditions in each country. The locations that field mechanics were sent to were sometimes challengingly remote or barren, and sometimes work was in a conflict zone fraught with danger. Communication issues were also a daily fact

of life. Toshiya Shiozawa (currently Aftersales Service Department General Manager) looks back on the time he spent as an FM in the 1980s, describing it in these terms, "It was hard work. You needed to have maintenance skills and determination to work alone in remote locations, and your ability to assimilate as a person was

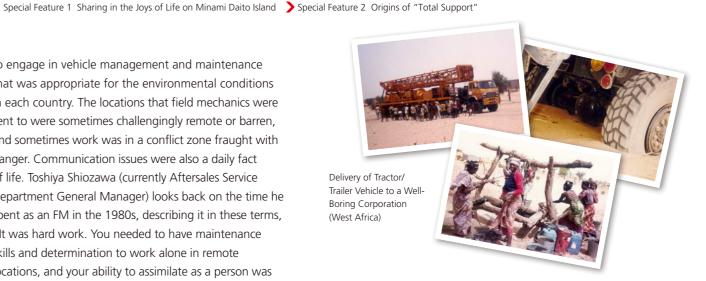
also critical."

"My first posting at the age of 23 was to West Africa, where we spent two nights and three days driving a tractor/trailer across the desert in order to deliver it to a well-boring corporation. It was a long and tiring journey, but we were welcomed by the smiling faces of the people of the village when we arrived. I subsequently spent time in many other countries. Wherever I went, when a mechanic needed to be called, the customer would naturally be initially angry. In such situations the only thing to do is do your job thoroughly and build trust. In our training, we had been told that you could not simply say 'no' to the customer or the local dealership—you had to visit the site and work to resolve the customer's problem, basing your response on the actual situation. I took this FM training to heart and, although there were highs and lows on the job, it turned out to be very fulfilling."

By 1996 the FM system outside Japan was in its 31st year. Their efforts to ensure a 100% operating rate for customers' vehicles by providing thorough aftersales services made a huge impact by boosting the value and trust users had for Hino Motors overseas. It also formed the basis for the current Total Support, which is a key concept for Hino Motors. That same spirit was also passed down to the Field Service Engineer (FSE) program, which replaced the original FM system.

#### Responding to Overseas Market Expansion and Advances in Maintenance Technologies

Since 2007, the year overseas vehicle sales first exceeded domestic sales, Hino Motors has continued to work to expand its business overseas. Today's FSE program, which



was devised as the successor to the FM system, has helped to improve service quality. Not only that, it has also been used to address advances in vehicle technologies and the increasingly complex vehicle systems of recent years.

While the FM system relied on people applying to become FMs after joining the company, the FSE program is focused purely on the development of specialist personnel, with the expectation that everyone on the program will be dispatched overseas. The capabilities required of FSEs are incredibly diverse, including not just vehicle maintenance skills and the ability to acquire new languages, but also interpersonal skills, knowledge of Hino vehicles, and knowledge and skills relating to onboard electronic systems. Participants in the program are dispatched overseas after a multi-year period of education

When out in the field, the FSEs are expected not just to repair vehicles, but also to play a consulting role on various themes closely related to customers' businesses, including providing ideas for customization and cost reductions. The role of the FSE has changed from the FM era as customer needs have diversified. That said, the basic mission remains unchanged from the FM era, namely providing services that customers experience as Total Support. This means that FSEs must ensure that customers' businesses are kept on the move by implementing optimized, high-quality services for each and every vehicle, so that the products provided by Hino Motors continue to contribute to the flow of goods and people around the world.

Yuki Imaoka, one of the first class of FSEs, puts it this way, "Wherever I travel around the world I can feel the legacy of my FM predecessors." "Even if I am

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traveling to a location for the very first time, the reason I am welcomed and accepted by local people in the workplace is thanks to the efforts of my FM predecessors in countries around the world." The total number of FSEs developed by Hino Motors now stands in the several hundreds, including people from the FM era. These practitioners of Total Support have worked to raise the value of Hino Motors by providing services that respond to the various needs and requests of customers around the world.

Hino Motors will continue to aim for further development and growth in all markets. In so doing it must always be remembered that, wherever they are in the world, Hino trucks and buses are engaged in work for each and every customer, each with their own needs and expectations.

FSE Imaoka with a skills contest participant, competing with others over service knowledge and skills (Canada).



The late Masashi Arakawa, who served as Chairman of the Board for Hino Motors from 1983 to 1985, once said, "FMs are the unknown soldiers of Hino. Without FMs there would be no global Hino presence." Team Hino today is dedicated to supporting customers around the world, carrying forward the practically focused spirit of FM and FSE and further deepening the bonds that they have built with customers, which constitute the origins of Total Support.

#### 61161



**Always Respecting Diversity** 

Toshiya Shiozawa Aftersales Service Department General Manager

My aim was to do a good job overseas through vehicle maintenance and so, after joining Hino Motors, I took the exam to join the 18th class of FMs. Although I worked in many places that were truly demanding, both physically and mentally, I was fully motivated to do my work based on the clear goal of "creating a foundation for the aftersales service of Hino Motors." Although I am no longer working hands-on in workplaces overseas, I firmly feel that my experiences and the respect for diversity I learned in countries around the world are now helping me in my role as manager of the After-Sales Service Department. I hope that everyone in the FSE program, which succeeded the FM system, will work to expand the original goals and further enhance Total Support so that the Hino brand goes from strength to strength around the world.

#### **Enjoying the Opportunity** to Work on the Frontlines Overseas at a Young Age

#### Yuki Imaoka

Strategy & Planning Group, General Management Department, Aftersales Service Department



During my student days when I was learning about manufacturing at the Hino Technical Skills Academy—the training institute operated by Hino Motors—I was interested in applying for the FSE program, an integral part of which is overseas posting. So I joined the company as part of the first class to take part in the FSE program. When working overseas, you experience situations that would be unthinkable in Japan, like traveling by plane to visit the site where repairs need to be implemented. The job is very rewarding, though, when you see the satisfaction on the faces of customers. I think it was thanks to my being posted overseas at a young age and being embedded in the local environment that enabled me to develop an open way of thinking that is accepting of diversity. I now alternate between spending several years in Japan and several years overseas, and during the times I am in Japan I feel that one of my important tasks is to convey my experiences to younger members of staff.