

HINO

A Global Brand for all Customers

Cares



Special Report : HINO TEAM SUGAWARA completes 26th Dakar Rally and wins 8th consecutive Under 10-litre Class title!

Also in this issue, a look at Hino's hybrid vehicles as they mark 25 years on the market.



HINO TEAM SUGAWARA Wins Dakar Rally 2017 for 8th Straight Class Title in *1-2 Finish*



HINO TEAM SUGAWARA rewrote the record books once again at the Dakar Rally 2017. The team achieved the stunning feat of completing its 26th straight*¹ Dakar Rally since first taking part in 1991 while also winning the Under 10-litre Class for the eighth time running. This year the event spanned the countries of Paraguay, Bolivia and Argentina. A total of 316 vehicles took part including 50 in the trucks category. As in past years, the race proved grueling with only 220 vehicles finishing. The team competed using two HINO500 Series trucks that had been given substantial engine and suspension upgrades. When the

competition kicked off, Car 2 shined, giving its larger rivals a run for their money. Car 1 put in one consistent run after another as it gradually worked its way up the ranks. Ultimately, Car 2 piloted by the team of Teruhito Sugawara and Hiroyuki Sugiura finished eighth overall in the trucks category while also taking home its eighth consecutive class title. Car 1 crewed by Yoshimasa Sugawara and Mitsugu Takahashi completed the rally in 29th place overall, taking second in class. At the end of the day, the teams HINO500 Series trucks dominated the podium by taking the top two slots in the Under 10-litre Class for the third straight year.

*¹ This figure refers to the races from 1991 to 2017, not including the 2008 rally, which was cancelled due to political unrest. For more information, please visit the Hino Global website (www.hino-global.com), where the activities of HINO TEAM SUGAWARA are reported in detail.



The Hino passion that fuels its Dakar Rally efforts are all rolled into the ‘Little Monsters.’

The Little Monsters. That is the endearing label that rivals have given to Hino's medium-duty racing trucks for their ability to go head-to-head with larger competitors at the grueling Dakar Rally—known as the world's harshest endurance off-road racing event. Powered by the HINO 500 Series, HINO TEAM SUGAWARA completed the race for the 26th time, a feat accomplished without ever having to drop out of the event.

This incredible success is the culmination of several factors. One is the wealth of experience of the Sugawara father-and-son team that pilots the racing trucks. The second is the precise truck maintenance supplied during the race by mechanics—the top in the field handpicked from Hino dealers around Japan. Third is nothing less than the unrivaled passion that engineers pour into the racing trucks in the form of advanced technology and innovation.

With the welcoming news of the 2017 Dakar Rally accomplishment still fresh in everyone's minds, HINO Cares in late January, sat down six engineers who spoke on behalf of the individuals tasked with building Hino's racing trucks.

“If our goal was simply to complete the grueling Dakar Rally, then it would be sufficient that we modify the commercially available Hino trucks by keeping their durability to make them Dakar-worthy. But we are aiming to place at or near the top, so we need to work to make our vehicles lighter and more powerful. One of the most difficult things is striking a balance between the endurance needed to complete the race and the power required to win,” said the General Manager of the Technical Research Center, Hidehiko Enomoto.

A manager of the Engine Engineering Division, Katsuyuki Nagoshi, echoes these sentiments.

“The race demands endurance and power. That is actually very much the case with the vehicles that Hino sells as well. The technology that we use on our racing trucks is an extension of the technology that we have developed for our day-to-day operations. Our technology is used and generates results in the rally, and then this is reflected in the vehicles that we bring to market,” he said.

However, this is not the sole benefit of the race.

“Using our technology to compete in what is said to be the most grueling motor sports race has become one of the factors in boosting the motivation of each department that works to make these vehicles. I see that as one of reasons for participating in the Dakar Rally,” Nagoshi added.

The engineers in charge of engineering the racing trucks have an additional challenge: they must balance their Dakar development efforts with their regular work requirements.



Hidehiko Enomoto



Mitsuru Enomoto



Takashi Yamashita



Syuuji Saito



Noriyuki Ishigami



Katsuyuki Nagoshi

“Honestly, it is a battle to find the time, but as difficult as that is, the difficulty is outweighed several times over by the fun involved,” said Power Train Evaluation & Engineering Division, Noriyuki Ishigami.

“I had a chance to ride into ride a Hino racing truck piloted by Teruhito Sugawara in Mongolia and experience how it handles on steep roads, feel for myself what needs to be modified, and then incorporated that into the development. I want to continue to win, and to engineer these trucks so that we can continue to congratulate one another on a job well done,” said a manager of the Vehicle Research Group of the Technical Research Center, Mitsuru Enomoto.

Participating in the Dakar Rally is surely increasing our motivation.

In 2012, the Dakar Rally rules for specifications of racing vehicles were changed. In conjunction with this, Hino, in the same year, replaced its racing trucks with new trucks. The team thoroughly analyzed the competing vehicles and found out a number of issues to be tackled to modify the HINO 500 Series. First, a more powerful engine was required, so an engine installed in a heavy-duty truck was adopted to modify the truck to generate more power. In tandem with this, myriad ideas were leveraged to bolster the powertrain including



the transmission to accommodate the new engine. The resulting truck and its specs formed the foundation for upgrades that were executed for subsequent race appearances.

“The rally takes place every January, so we need to have Hino's trucks completed at the latest two months before this to be shipped to the competition venue,” said a member of the Engine Engineering Division, Syuuji Saito. “As soon as the trucks are on the ship and headed for the race. As soon as the race starts, we find out about the daily driving performance and conditions of the Hino trucks which we see as new challenges. We then begin focusing on enhancements that can be made for Dakar Rally the following year. It's the same process each year,” he adds.

Prompted by this, a member of the Technical Research Center, Takashi Yamashita, added: “Through a process of repeated enhancements, we believe our Dakar trucks have reached a point where they can go head-to-head with heavy-duty trucks that have 1.4 times in the engine displacement, and I believe there has been a strong response. In the 2017 race, we were breathing down the back of the fifth-place overall finisher. I think that, as a medium-duty truck, we are doing a great job of giving the heavy-duty trucks equally.”

Hino's unwavering Dakar Rally efforts and its constant drive to enhance its technology will continue. In 1997, Hino swept the top three spots in the trucks category for the first time in the Dakar Rally history. The day may not be far off when Hino marks a similar achievement by taking the overall title at Dakar.

Hino Hybrid Vehicles Mark 25 Years: A History that Paved the Road to New Hybrid Possibilities

Koichi Yamaguchi
General Manager /
Hybrid Vehicle Development Div.

Hybrid vehicles rely on at least two sources of power. These typically include fuel to power combustion engines and electricity to drive an electric motor. Hybrids have carved out a place in the world today as one of the environmental means of transport that has made advances in fuel economy and reduced emissions. While it may be news to some readers, Hino was the first vehicle manufacturer to mass-produce a diesel-powered electric hybrid vehicle for commercial use.



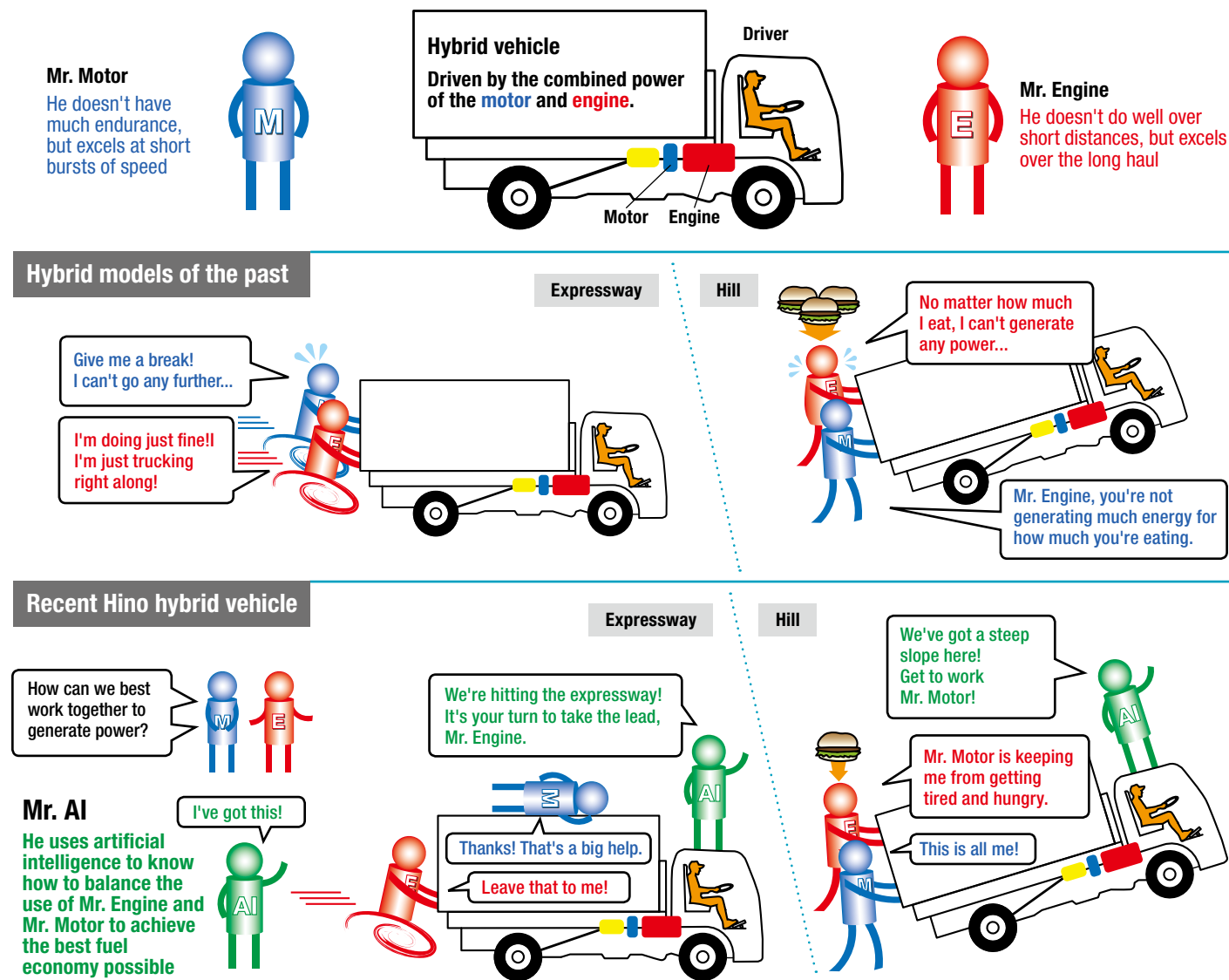
Hino released the world's first mass-produced commercial hybrid vehicle when it brought a hybrid heavy-duty bus to market in 1991. The vehicle was equipped with Hino's proprietary parallel hybrid system, which, we believe, has since won a reputation worldwide as one of the optimal hybrid systems for diesel vehicles. More than 25 years since debut of the hybrid system, we understand the system is still the model that underlies the hybrid systems of many automakers. We believe this speaks to the forward-looking stance and technological prowess of Hino—and Hino's hybrid vehicles have continue making great strides over the past 25 years.

Since joining Hino in 1992, Koichi Yamaguchi has spent his entire career on the development of hybrid vehicles. Yamaguchi says that Hino's hybrid vehicles continue evolving primarily in three areas—what he calls the “unit area”, the “system area” and the “control area”. “Unit” refers to each element which constitutes the hybrid system, including the motor, inverter, and battery. “In the process of arriving at the current fifth generation of Hino hybrid vehicles, we have designed each unit to maximize efficiency, refining each unit to be smaller, lighter and less expensive. Meanwhile, the hybrid “system” is subject to the demands and trends of the times and factors that include regulatory change. So, it is possible for us to expect that the “system” will continue to be required rapid innovation and agile evolution moving forward. In contrast to the hardware element, system “control” needs to evolve with a perspective that takes into account the needs of the future,” Yamaguchi says. He explains that one of the most important issues in innovation to improve system “control” is how to most efficiently make use of the electric power that has been generated. “Put simply, enhancing the

The world's first mass-produced commercial hybrid vehicle, the HIMR bus (left), was released in 1991. The light-duty hybrid truck, the Dutro, hit the market in 2003.



Hino hybrid vehicle system



In 2011, Hino Motors became the first vehicle manufacturer to mass-produce hybrid vehicles that harness AI to optimize the use of the engine and motor. This can improve fuel economy by up to 5-6%.

Note: Based on research by Hino Motors.

control of the system is akin to updating a computer operating system to tease out the maximum possible performance from the hardware. I believe that about 70% of the improvement of Hino's hybrid vehicles depends on enhancement in system “control”, he adds.

A prime example of Hino's continued advancements is the Hino hybrid vehicles that launched in a certain market in 2011 with artificial intelligence (“AI”) control functions. Diagram 1 contains a simple illustration depicting how AI control functions make the possible performance of the hybrid vehicles put out. The diagram shows how the evolution of “control” is crucial to the evolution of hybrid vehicles.

This raises the question of how much further Hino's hybrid vehicle “system” control can be expected to evolve. Yamaguchi explains: “Hino's hybrid vehicles are equipped with what we call a ‘neural network’ that is designed to learn the driving patterns and habits of vehicle operators and to offer optimal vehicle system control and

optimal timing for top performance. After a certain period of time, the vehicle becomes familiar with the vehicle operators' habits such that, for light-duty hybrid trucks with frequent vehicle operator changes, the vehicles are also designed to determine when best to use generated electric power regardless of the vehicle operator and even take into account the load weight to achieve better fuel economy. Yamaguchi says that while he can't yet reveal specifics, an even more advanced control system is being developed. Yamaguchi says that there remains scope for enhancing hybrid vehicles and there is a tendency to think that the current products and technology can't be improved upon. But when we arrive at that point, that is when we need to approach the challenge from new angles and look for new insights.

We believe that the quarter-century history of Hino's hybrid vehicles has helped to pave the road that led to the hybrid vehicles of today. And, if Hino's unflagging enthusiasm is any indication, then Hino's hybrids can be expected to be at the vanguard of future advancements as well.

Providing Post-purchase Service to Ensure Future Business

Mr. Nozomu Harada
President / Hino Motors Sales Mexico,
S.A. de C.V. (HIMEX)



President of distributor Hino Motors Sales Mexico has a business philosophy that places a premium on post-purchase service.

"We believe that our relationship with the customer really begins in earnest and is more important after the vehicle purchase. We pro-actively provide attention and service in our post-purchase relationships with customers. This involves offering quality products, quality services, and quality maintenance techniques as a whole.

One prime example is our Eco Driving Seminar. HIMEX presents drivers that attend its seminars with a notebook called "PASS-PORT," which they can use to collect stickers every time they use HIMEX services. These stickers can be exchanged for novelty goods of the driver's choice. Original services like these are also appreciated by the managers, and help create a connection with the drivers.

Here we feature the comments of three companies in Mexico that have benefitted from the attentive service of HIMEX.

Envia | Mr. Fernando A. Rodoríguez Medellín, Director Mr. Emanuel Martínez Morales, Director of Administration & Finance

Since Envia first began operating in the transport sector in 1961, the firm has emerged as a leading force in transport and logistics in Mexico. In recent years, Hino vehicles have proved crucial the company's business.

"We've been using Hino vehicles since 2007, when HIMEX was established as a distributor in Mexico. Hino vehicles are cheaper than the competition when it comes to fuel economy and low maintenance cost, we are very satisfied with their durability," said Mr. Morales.

He recounts a story that made him a fan of Hino early on.

"Actually, with our first Hino vehicle, I felt that the outside door handle was located inconveniently high. After I told HIMEX this, a technician from Hino came and confirmed our preferences. They took the vehicle back to Japan, revised the specs so that location of the handle has been perfect on every subsequent order. I don't know any other company that would be this accommodating."

This story conveys the firm's satisfaction with and trust in Hino. Mr. Medellín adds: "The other day we asked drivers of our Hino vehicles what would they say if they were asked to switch to another brand. They all said they would say no, and preferred Hino. Clearly they are satisfied with the performance of Hino vehicles."

We Choose Hino for the Personal Touch and Superior Specs



Mr. Emanuel Martínez Morales



Mr. Fernando A. Rodoríguez Medellín

Envia is also known for its proactive environment-related initiatives. Mr. Medellín says that it plans to add 50 Hino hybrid vehicles by 2020 and continue to support the training of its drivers with Hino's Eco Driving Seminar as well as hybrid vehicle driving seminars.

The green "e" on the front of the truck to the right is Envia's new corporate logo and also represents its commitment to environmental initiatives.



Unilever de Mexico | Mr. Luis Miguel Reyes Romero, Coordinator Senior Distribution & Vehicle IC



Working to Make Customers Smile and to Contribute to a Better Global Environment

Established in 1922, Unilever de Mexico delivers the globally renowned Unilever brand Holanda ice cream to its network of shops and others. To deliver to a network of 150,000 stores within Mexico, Mr. Romero uses a fleet of 600 trucks and 1,000 drivers. He first encountered Hino in 2015 at an event designed to bring together truck manufacturers and truck users.

"After the Hino purchase I noticed a few things. First, there is of course the quality, but beyond that the service is great. They've provided the Eco Driving Seminar to our drivers more times than I can count. The seminar really gives detailed ways of improving gas mileage," Mr. Romero said.

"Moving forward, to help the global environment we will be switching 60 to 80 of our diesel truck fleet to hybrids," he said, adding with a big smile, he said, "This is related to our business target of doubling sales volume and halving carbon dioxide emissions...and also my personal dream of putting a smile on the faces of everyone who eats Holanda products."



Smartlease Transporte Inteligente | Mr. Arturo Zamorano, General Manager

Reduced Management Costs Coupled with Top Performance: We are Happy with Hino



Mr. Zamorano explains what led the company to go with Hino.

"We were using U.S.-made vehicles, but we gave Hino a try to compare the fuel economy with Hino vehicles. The result was that Hino vehicles got better gas mileage, furthermore we also realized that maintenance costs are lower with Hino than with other companies. Hino vehicles have consistently given us superior vehicle performance and great service. We're very happy that we made the move to Hino."

Readers will likely be familiar with international blue-chip companies such as Walmart, DHL and UPS. The leasing company Smartlease counts these among their valued clients, as well as Mexican businesses such as transport firm Esgari and the department store chain Liverpool. The success that Smartlease has enjoyed is evident in the size of its fleet which surged from 30 vehicles in 2014 to 300 in 2016. Of these, 128 are Hino vehicles, including hybrids.

During the busy months of December and May, the company says that almost all of the vehicles are leased, said Mr. Zamorano, adding, "Buoyed by this strong demand, the company is aggressively looking to expand."

"Currently, we have two domestic sales offices, but we are planning to increase this to 32 within five years to offer our services to customers across Mexico," he said.



Hino World Conference 2016 :

Heightened Solidarity and Reaffirming a Mission to Contribute to Society and Customer Businesses



The Hino World Conference 2016 took place in October in Tokyo. This conference is a major event held every four years to share Hino's vision and strategy with distributors who gather from across the globe. This was the fifth world conference and was attended by more than 350 individuals with ties to Hino in more than 60 countries and regions.

After a stunning video to kick off the event, President Yasuhiko Ichihashi took the stage. There he gave an impassioned talk about Hino's vision for the future. He stressed that Hino aims to be the industry leader not only in products and services but also in Total Support to contribute to the world through supporting the businesses of customers. Next, Senior Managing Officer Ichiro Hisada spoke from his position in charge

of overseas business operations. He explained efforts to strengthen further Hino Total Support, including initiatives to realize the timely supply of parts, operational support for fleet managers and for drivers, and enhanced service tools and stepped-up training for mechanics. He was followed by a presentation from Senior Managing Officer Shin Endo about developing products tailored to regional needs and a talk by Managing Officer Hideyuki Omata about the new Koga Plant and its positioning as a global production base. The common thread running through conference was Hino's commitment to respond promptly and accurately to customer needs worldwide. Participants strengthened the bonds and solidarity of Team Hino to better respond to diversifying needs through ever-better products and Hino Total Support.



Second HINO Cares Photo Contest Winners!

The theme of the Second Hino Cares Photo Contest was "my favorite road." The editorial team would like to thank everyone who took part and for the many photograph submissions from around the world. The works were clearly imbued with the intentions of the people

behind the lens and screened at Hino headquarters by managers in charge of overseas sales and marketing. All received strong reviews. The two winning pictures are shown below with comments from the winners.

First Place

Mr. José Mosquera (Ecuador)

Transportes Mosquera



"I'm very honored to receive this award. This picture is of a road I take daily that connects Quito (the capital) with the town where I live. I'm also happy that I was able to show you a little of the wonderful Santo Domingo de los Tsáchilas province. I've been driving a Hino truck for 15 years and it has never let me down. It easily handles the curves, has power and amazing performance that constantly impresses me. Hino is the best partner I could have and I will continue to be a Hino customer going forward."



Second Place

Mr. Pedro Felipe Soto Torres (Chile)

Hino Chile una empresa Indumotora

"I never dreamed that my picture would be selected. I was happily surprised to learn that my picture had taken second place. Thank you very much."

This is a picture that I took on vacation of a road that I liked very much."



Please share *your opinion* with us

We would greatly appreciate your feedback to further improve this magazine.

Send in your feedback for a chance to be one of 10 lucky respondents selected to receive Dakar Rally items.



Examples of gift items

Items are subject to change without notice.
The Editorial Department will select the items.

Please respond to the below survey items.

Please note that the response method has changed slightly from the last edition.

■ Please check ☒ one box for each article.

Article \ Your opinion	Very good or very interesting	Good or interesting	Neither good nor poor	Poor or uninteresting
Dakar Rally 2017				
Dakar Development Interview				
Hino Technology (Hybrid)				
Owner's Voice				
Hino World Conference 2016				
Photo Contest Results				

■ Please scan or snap a picture of your feedback and send it via email to marketing@hino.co.jp
Before sending, please check to make sure the file is legible.

■ Please remember to include the below information in the text of your email:

1. name, 2. gender, 3. company name, 4. title/position, 5. country, 6. address and 7. connection with Hino (please using one of the following options: a) customer, b) dealer, c) distributor or d) other).

Thank you in advance for your cooperation.

Responses are to be submitted by June 20, 2017.



Hino Motors, Ltd.
3-1-1 Hinodai, Hino-shi, Tokyo, 191-8660, Japan



To read HINO Cares magazines online,
scan this QR code using your smartphone or access
http://www.hino-global.com/about_us/hino_magazines/

Global Site: <http://www.hino-global.com>

©Hino Motors, Ltd. All rights reserved. No part of this publication may be reproduced, copied or transmitted in any form or by any means.

Printed in Japan