

HINO

Cares

Issue 008

2009 Spring / Dakar Rally

Dakar Rally makes HINO passionate

From 1991 when HINO first entered this race until 2009, HINO has crossed the finish line 18 years in a row, with many championships.

Why is HINO so passionate about Dakar Rally?

What does Dakar Rally mean to HINO?

This issue of HINO Cares will be a "Special Dakar Rally" issue where we will be learning more about the Dakar Rally and what it means to HINO.



18 consecutive finishes at the Dakar Rally

Extreme conditions give us much to learn. The Dakar Rally is like a “school” to us.

HINO Team Sugawara

Driver, truck #1 (511) : Yoshimasa Sugawara

Driver, truck #2 (513) : Teruhito Sugawara



Etap3, January 5, 2009 (Puerto Madryn-Jacobacci)
Truck #1 driven by Yoshimasa Sugawara



Etap13, January 16, 2009 (La Rioja-Cordoba)
Truck #2 driven by Teruhito Sugawara



Heated discussions are commonplace during daily tactical meetings



Before the start, the Sugawaras are relaxed thanks to their extensive experience



Yoshimasa Sugawara



Taking a break at the bivouac after traversing the Andes at an elevation of 4,200m

“When you’re racing the Dakar Rally, you never know what’s going to happen the next instant. We hardly have time to blink during more than 10 hours of driving we do a day. The reason I was able to finish without giving up was my strong desire to not let down those who have supported us. I intend to keep this commitment close to my heart,” says Teruhito Sugawara, driver of truck #2 in the HINO Team Sugawara. Teruhito’s HINO 500 Series came in second place in the trucks under 10-liter class in the Dakar Rally 2009, which traversed the South American continent between Buenos Aires, Argentina and Valparaiso, Chile.

The Dakar Rally is said to be the world’s most extreme motor sport, which sees competitors race a course of approximately 10,000km over a period of several weeks. HINO has been competed in this race with Team Sugawara since 1991. Ever since, in this rally where about half of the entrants typically retire without finishing, HINO and Team Sugawara have finished all 18 of the races they have entered. Moreover, HINO also won the overall championship in the truck category in 1997, and has won overall second place on 5 occasions. With 26 Dakar Rally entries under his belt, Yoshimasa Sugawara, the leader of HINO Team Sugawara, holds the record for the most races entered and the most consecutive finishes in the Dakar Rally. With strong hands that belie his age - 67 years - Yoshimasa takes the helm of truck #1. We asked him which of the Dakar Rally races that he has raced in with HINO left the greatest impression on him. The reply from Yoshimasa and his son Teruhito was unequivocal, “2009 Dakar.” For the first time in the history of this rally, the race was held in South America. Everything from the weather patterns, terrain, and elevation were drastically different from what they had experienced previously on the African continent. While the Dakar Rally has been called the most extreme race in the world, this year’s competition took that a notch higher. The race route itself, which took drivers through the Patagonian plains, Atacama desert, and Andes passes taxed all competitors to the maximum, not least the two HINO Team Sugawara entrants. Truck #1 driven by Yoshimasa became stuck and immobilized in sand dunes due to a drive train problem. Never one to give up, Yoshimasa and his navigator shoveled for 14 hours and were finally able to dig their way out of the sand. Truck #2 also encountered drive train

problems numerous times on the rough terrain. As Yoshimasa remarks, “I’ve never seen a truck return to the bivouac with no bumper and fender,” this 2009 Dakar Rally must have been the most extreme race in the history of this rally. The fact that both HINO trucks were able to cross the finish line for the 18th time under these conditions is testimony to the strong conviction among team members to work together as a team, reflecting Teruhito’s commitment to “not let people down” as well as the “never-say-die” spirit of HINO mechanics, who burned the midnight oil to service damaged trucks.

During our interview, Yoshimasa referred to the Dakar Rally as a “school,” reflecting on the multitude of things that can be learned under such harsh circumstances. Yoshimasa says, “I would like to keep working hard to communicate things like the spirit of taking on a challenge, never giving up, and the importance of communication to the younger generation.” In these strong words, we can almost see HINO Team Sugawara at the next race, rewriting its record for the most finishes.



Teruhito (left) and Yoshimasa (right) at their Tokyo office



2009 HINO's Dakar Rally Truck

The new Little Monster is the product of our unprecedented challenges.

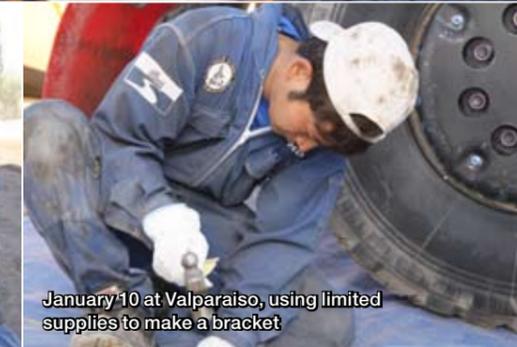
Yasushi Nakamura, Overseas Parts and Service Division
Shigetoshi Kudo, Overseas Parts and Service Division
Junpei Morita, Planning & Production Engineering Division



The Little Monster. If you are a Dakar Rally fan, you will probably know that this is the nickname given to HINO's racing trucks in this Dakar Rally that traverses the extreme condition. HINO's Dakar Rally entries have never retired due to mechanical problems in any of the 18 races in which they have competed. Based on the HINO 500 Series, which is renowned for its good durability, we believe this medium-duty truck competes fiercely against larger monster trucks and is feared by its rivals as the "Little Monster."

To enhance the Little Monster's performance to a level befitting its moniker, the 2009 Dakar Rally truck was modified to a degree never seen before. "Dakar Rally regulations are revised every year, with a new modified vehicle category created this year. Always in pursuit of new possibilities, entering in this category was a no-brainer for HINO Team Sugawara" says Yasushi Nakamura, one of the mechanics at the 2009 Dakar Rally. Joining us for this interview are two other HINO mechanics, Shigetoshi Kudo and Junpei Morita. "The major difference from the previous Dakar Rally trucks is its engine position. Trucks, which are typically used for commercial purposes, have their engine mounted in the front to increase load space in the back. For this race, we moved the engine back by 420mm to create a mid-engine configuration" says Morita. There is an important reason for this. By moving the engine — a heavy component — closer to the center of the vehicle, designers are able to optimize the front-rear weight balance, enhancing the stability and handling feel. "In simple terms, the truck feels more drivable" says Kudo. This is encapsulated in Teruhito Sugawara's comment after a test drive: "The truck behaved completely differently during jumps and when subject to shocks. It's definitely a better racing truck." However,

moving the engine to the rear is no easy feat according to Morita, "All the wiring and tubing layouts had to be pretty much redone. We also moved the transfer, and extended the wheelbase to enhance overall stability and achieve a more stable attitude of the truck." These modifications were carried out based on significant input from HINO Team Sugawara — the people who know more about the HINO 500 Series in racing conditions than anybody else — and after numerous trials and errors. In addition to its new engine position, the 2009 Dakar Rally trucks was designed so that the formation of air pockets between the cabin and rear body, as well as tail turbulence would be reduced for better aerodynamics. The front panel and rear gate were also eliminated to achieve considerable weight reductions. These are just some of the ideas incorporated into the latest racing truck.



As a result, HINO was able to achieve its 18th consecutive finish at the Dakar Rally. So, in real-world racing conditions, how well did the Little Monster live up to its potential, gained from these modifications? "The truck drove particularly well in the desert. It's really well balanced, including its weight balance. I think longer stretches of desert benefit HINO trucks (Nakamura)." "The overall balance was very good so I think we can enhance it even more by fine tuning the details (Kudo)." "There were a lot of things that

we hadn't noticed until the race began. Now we know what to expect next (Morita)." During our interview, we were impressed by the sparkle in the eyes of these three men. The passion and spirit of the challenge directed towards modifications had the effect not only of increasing the potential of the racing truck, but also of enhancing the motivation of HINO staff. This interview made us realize the reason behind HINO's ongoing participation in the Dakar Rally.



Learning from Dakar's lessons today

Dakar has taught us the meaning of always exploring what we can do now and trying our best.

Yoshimitsu Yaguchi, Overseas Parts and Service Division
 Tsuguo Kameda, Overseas Parts and Service Division
 Kei Sato, Overseas Parts and Service Division

The Dakar Rally is not simply a competition between racing trucks. How do we tune the racing truck to win? How do we control it? Which route should we take? How do we deal with unforeseen problems? How do we find the best solution under time constraints and limited conditions? The answers to these questions require "human" judgment, as well as passion and fortitude. Seen from this perspective, the Dakar Rally can be said to be a competition between people; a trial of "human capabilities" under extreme conditions. We keenly feel so after speaking with many Dakar Rally participants to gather information for this issue of HINO Cares. The HINO 500 Series is known for its durability and performance potential. It has rewritten its own record by finishing 18 straight Dakar Rallies, and we believe it has provided its superiority as a truck. This is a milestone that we have been able to reach only because of the capabilities, passion, and teamwork exhibited by the driver and navigator, as well as the best HINO mechanics, a large number of HINO staff members who were unable to actually take part in the race but spared no effort to support the team, and HINO distributors throughout the world.

We are here today at the TV conferencing room at HINO headquarters with three HINO staff members who have previously participated in the Dakar Rally as mechanic managers. They are Yoshimitsu Yaguchi and Kei Sato from Overseas Parts and Services Division, and Tsuguo Kameda, who is responsible for HR training in the same division. Sato, who currently works in Detroit, USA, will be joining us via TV conference. Having met each other for the first time in a long while, the three had many memories to share about the Dakar Rally. Kameda, who has taken part in six Dakar Rallies, the most among the three, reflected on the race and says, "Often times, staff members from foreign companies, the people who we were racing against, would just gather at HINO's tent at the bivouac. This was probably because we placed importance on communication above all else. Since participants were only able to bring the bare minimum of parts and supplies, if someone was short of a bolt or a nut, we would borrow or lend them among each other even if we were racing against each other. So I learnt the importance of people connecting with people at the Dakar Rally." Yaguchi, who has taken part in five races says, "As the race proceeds, I feel myself blend in with the locals and the local atmosphere. The following year, the local people will still remember me. What more can I ask for?" Listening to these stories, we start to think that this race, which is touted as being the most grueling race in the world, perhaps might even be the gentlest race in the world in the sense that people experience the warmth of connecting with each other across national borders.



Kameda, during the HR training



Yaguchi, working as Assistant Manager in Americas Oceania Regional Service Group



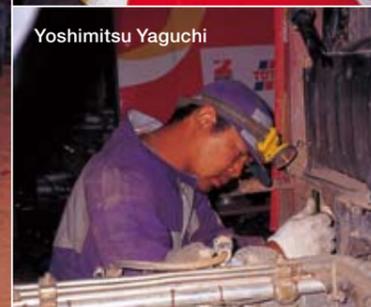
Sato, currently working in Detroit, USA



At Zouerat. Kameda and Yaguchi concentrating on their work, Granda-Dakar Rally in 1996



Tsuguo Kameda



Yoshimitsu Yaguchi



Sato with earnest eyes, Atar, Mauritania



Sato servicing a truck, Er Rachidia, Morocco



Lisbon-Dakar Rally in 2007



Yaguchi (left) and Kameda (Right), Sato joined us via conferencing TV from Detroit

What other things have you learnt in the Dakar Rally? "Do the best that you can at that moment. Even if the truck breaks down or you don't have parts, you have to get the truck moving," Sato says as Yaguchi and Kameda nod deeply in agreement. "I'm responsible for technical instructions for trainers that come to our training center from around the world. What I always stress is that if a commercial truck is out of commission for even a day that would represent a loss for the business. One of the most important things is to do whatever you can — even stopgap measures if need be — so that the truck is not rendered inoperable even for a day and the customer can continue business; the same thing that we do at the Dakar Rally," says Kameda. HINO sees its customers beyond its trucks. Again we feel strongly how important it is for people to connect with people.

The Dakar Rally — where people compete against each other through a medium, their racing truck — is a race that teaches us the importance of communication and the conviction to give it one's best. This atmosphere communicates not only to the participants, but also to the audience. And perhaps this is why the race is called the "most grueling race in the world" and continues to be popular for so long.

The reason HINO continues to take on the Dakar Rally challenge

The Dakar Rally is one of the pillars of the HINO brand.

Tsunehiko Fujii, Senior Managing Director, Member of the Board



“As our readers are surely aware, HINO is a manufacturer of trucks and other commercial vehicles, which means the products we manufacture are capital goods rather than consumables. They are tools that our customers use on an ongoing basis to run their businesses, which, we believe, they should not be easily broken and even if they do, they should be immediately repairable. In other words, their reliability should be ensured. The Dakar Rally gives us the opportunity to prove the reliability of HINO trucks under extreme conditions. While this is the major reason HINO continues to compete in the Dakar Rally, it’s not the only one. The Dakar Rally is also an important project in which all relevant individuals at HINO are able to engage whole-heartedly in order to realize their dreams. It is a measure of the extent to which we are able to unify to achieve a single objective.” HINO began competing in the Dakar Rally in 1991 as part of a series of commemorative events to mark the 50th anniversary of HINO in 1992. While the 2008 race was canceled due to political unrest in the host country, HINO has competed in all 18 races since 1991. The above comment by Tsunehiko Fujii, HINO’s senior managing director, outlines the reasons why HINO has continued to do so.

Truck technologies must continue to evolve — economic efficiency through enhanced fuel consumption, durability for extended operating lives, safety performance to reduce the risk of accidents before they occur, the comfort and ease of operability in the cabin, performance level that ensures powerful driving, even on rough terrain, and environmental compliance through reduced emissions — because trucks are key to logistics operations. There are a multitude of challenges that need to be overcome to accommodate the increasingly diversifying needs of our customers. We never give up, no matter what obstacles we face. We continue to take on all challenges. We believe HINO’s numerous and renowned technologies were born from these strong convictions and our passion. This spirit of development can be seen in light of the challenges HINO takes on in the Dakar Rally. “How do we increase HINO’s potential in the area

of technological development? We wanted our engineers to experience these challenges. None of the technological innovations that are required of trucks — from emissions regulations compliance to the development of hybrid drive trains — can be realized unless we take on these challenges. The Dakar Rally requires people to take on challenges under extreme conditions, where we don’t know what is going to happen next. In a way, this gives us clear-cut opportunities” says Fujii, remarking that the Dakar Rally experience is an asset for HINO staff members and for HINO as a whole. “Only a handful of mechanics are able to take part in the Dakar Rally. Each year, we screen many applicants. This desire to take part in the Dakar Rally, and the passion on the part of these mechanics to enhance their skills has resulted in the emergence of ‘super mechanics’ in the true sense of the word. We are also happy to know that our distributors, dealers, customers, and sponsors continue to support our efforts. Even people in markets where we do not have a presence associate the HINO brand with the Dakar Rally, and many overseas distributors cheer us on too. The Dakar Rally is an integral pillar for marketing the HINO brand overseas.”

With respect to HINO’s future plans to compete in the Dakar Rally, Fujii says, “The culture of motor sports and environmental issues are contradictory on several levels. Culture is an indispensable part of our lives, but how can we harmonize motor sports with ecology? This is a tough challenge, but one that we need to nonetheless face. In this respect, HINO’s challenge would be to enhance our technological development in future, and create a corporate constitution that will allow us to actively pursue new possibilities.” Constantly in pursuit of technological innovations, HINO will continue to compete in the Dakar Rally with a vision of its future self beyond the finish line. In concluding our interview, Fujii says, “We intend to compete in the Dakar Rally for as long as the race is held.”



Comments on HINO's participation in the Dakar Rally by supporting distributors

Passion of the supporters empowers HINO in pursuing the goal.

The names on the bodies of HINO's Dakar Rally racing trucks represent more than a list of our sponsors. Each of these names embodies sponsor's passion for the race, which is also what drives HINO. Of the new sponsors who have shown support for HINO Team Sugawara, we would like to introduce comments from four overseas distributors of HINO: *The distributor's name is listed in alphabetical order.

Chile / Eduardo Avayú G. / Vice Chairman Indumotora

We are very honored to have been able to take part in this Dakar Rally as a sponsor. As a representative of our company and as a fan of the HINO team, this was an opportunity that we could not pass up. We wanted to be able to proudly proclaim, "This is our truck!" The Chilean truck market demands a lot. I believe that Chilean will recognize the high quality of HINO trucks for as long as HINO continues to race in the Dakar Rally.



Eduardo Avayú G

Hong Kong / Patrick Lee / Managing Director Crown Motors Ltd.

The people of Hong Kong are also proud of HINO's ongoing participation in the Dakar Rally. This is because they see HINO as a brand that represents Asia. In supporting the race this year, we hoped to raise the recognition of HINO's efforts and the Dakar Rally in Hong Kong. We were very excited to feel as if we were a member of the HINO Team Sugawara.



Patrick S. Lee (left) and Ernest Wong (right)

India / Hiroshi Nakamura / Managing Director & CEO HINO Motors Sales India Pvt. Ltd.

I believe competing in Dakar Rally is an effective way of building the HINO brand because the harsh rally conditions require nothing less than the best in product quality and teamwork among our staff. We hope to communicate to our customers and dealers the excellent performance and quality of HINO products, as well as HINO's confidence and passion, and the serviceability of our products. Moreover, we also hope that this race will boost our employees' confidence in the HINO brand.



Hiroshi Nakamura

Thailand / Yoshinori Noguchi / President HINO Motors Sales (Thailand) Ltd.

HINO's commitment to take part in the Dakar Rally and the HINO's attitude to take part in the Dakar Rally and the courage of the team members represent our "honor" and "hope" for the future of HINO. I believe HINO's challenge to the Dakar Rally not only allows us to prove the durability, robustness, and toughness of HINO trucks, but also communicate the fact that HINO is an international brand. I hope HINO continues to compete in the Dakar Rally.



Yoshinori Noguchi

HINO Eco Driving

Eco driving for maximizing HINO's potential Part 4: Tips for improving fuel efficiency in routine inspections

This will be the last installment of the "fuel efficient driving tips" series. You will remember that none of the fuel efficiency tips that we have given you over the last few editions — "Tips for take-off and acceleration," "Tips while driving" and "Tips for deceleration" — involved complicated techniques. In this final article, we would like to focus on fuel efficiency tips that you can incorporate in your "routine inspections." Again, these are all simple tips that you can begin using today. We hope you will put these into practice in addition to the fuel efficiency tips that we have given over the last three issues (Please see previous issues for details). By simply incorporating a fuel-saving mindset into your routine, we believe that you will be able to maximize the fuel saving potential of HINO trucks.

First, we would like to take a look at the ten most frequent types of roadway breakdowns (Table 1)¹. While, as you can see, flat tires are at the top of the list, today we would like to direct your attention to other areas. In addition to "flat tires," you'll notice other failures such as "startup failure," "charge system failure," "light system failure," "air leaks," "engine coolant leaks," "belt damage" and "overheating" — all of which, we believe, can be avoided by conducting routine inspections. Before we continue, we want our readers to recognize the importance of daily routine inspections in reducing roadway breakdowns, which ultimately can impact a business's bottom line. Table 2² shows the relationship between tire pressure and fuel consumption. A larger amount of tire deformation occurs at lower tire pressures. This leads to increased rolling resistance, and hence decreased fuel economy. A mere 10% decrease in tire pressure can result in a 4% decline in fuel efficiency³. Therefore, we believe making it a part of your routine inspections to check and keep your tire pressure correct is a very simple way of conserving fuel. Additionally, we believe maintaining proper tire pressure generally helps lengthen the life of your tires, so in this respect also, it is something that you want to check everyday.

We would like to describe some other points in your routine inspections for achieving fuel efficiency. We believe one of those points is to keep your air filter clean. A clogged air filter can decrease the amount of intake air, which in turn has an adverse

effect on combustion and leads to decreased fuel efficiency. Studies conducted by HINO show that clogged filters can cause a roughly 3% decline in fuel efficiency⁴. In other words, simply by routinely inspecting and cleaning or replacing your filter, we believe you may be able to eliminate one obstacle to better fuel efficiency. And when you do replace the filter, we recommend that you use HINO genuine parts for the engine's reliability and fuel efficiency.



Continuous inspection at the bivouac helps to reach the goal.

Our next topic in terms of enhancing fuel efficiency through routine inspections is oil changes. We believe fuel efficiency may decline by 1-2% if oil is used for longer than its operational life⁵. But not only does using oil in this way may have an adverse effect on fuel efficiency, it can also affect the engine's operational life. We believe this is why regular oil changes are crucial. When you change your oil, we recommend that you use HINO genuine oil for fuel efficiency and performance.

HINO Team Sugawara continues to rewrite its record for the most consecutive finishes at the Dakar Rally. Needless to say, without the meticulous inspections conducted every night at the bivouac, they would not have been able to finish the most grueling race in the world. The same can be said for the trucks we see on the streets. Through routine inspections, we believe you can maintain your truck's fuel efficiency and also find potential problem that can lead to failures. And we believe this in turn allows you to reduce roadway breakdowns that affect your bottom line. We believe the path to fuel and economic efficiency is paved with these simple routines. As you already know, none of the fuel efficiency tips we have shared over the previous 3 issues and this one involve complicated techniques. All you have to do to reap these benefits is to keep these points in mind and put them into practice.

Table1 : Trouble on the road-worst 10 Problems that can be prevented by daily inspection

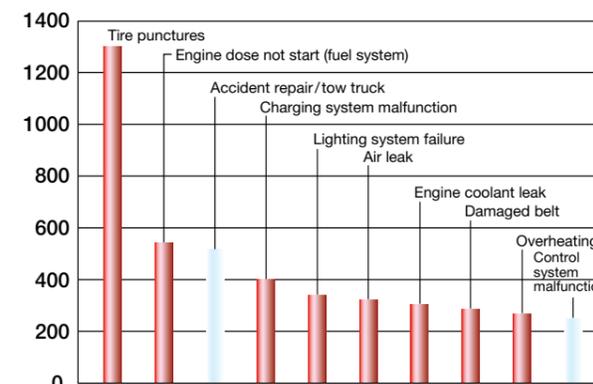
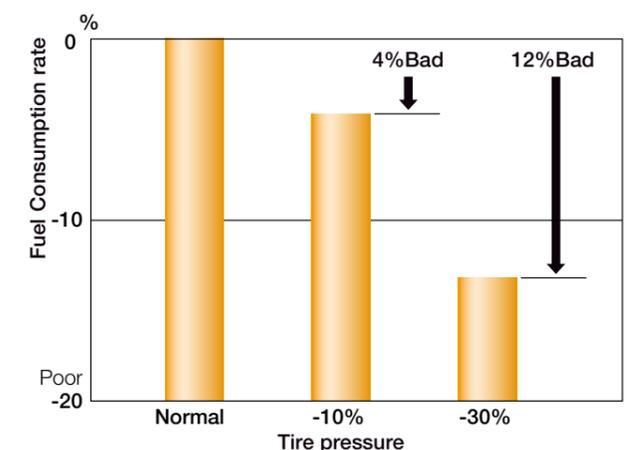


Table2: Keep the specified tire pressure



Source: Data measured by Hino Motors, Ltd. *1,2,3,4,5 The result may not always be constant which will depend on the driving condition.

Looking back at 18 Dakar Rallies

Crossed the finish line 18 years in a row since its first entry in the race.
Won the first-ever sweep in the truck category in 1997.

In 1991, HINO became the first Japanese truck manufacturer to enter the Dakar Rally. And ever since, HINO has finished in all 18 Dakar races in which it has taken part. In 1997, HINO surprised the world, becoming the first team to make a 1-2-3 sweep in the truck category. Since then, HINO has been runner up for 5 years, and has become one of the top teams in the category. Additionally, HINO won the championship for 7 consecutive

years in under-10-liter class, which was instated from 1996 to 2002. HINO won the championship again when this class was reinstated in 2005. In 2007, it won the class championship. And this year, in the first Dakar Rally to be held in South America, HINO won second place in the category. In this issue, we would like to look back at HINO's footsteps in the Dakar Rally.

Entry	Year	Route	Distance (km)	Vehicle	Result (Truck category/under 10-liter class)
18	2009	Buenos Aires - Buenos Aires	9,579	Hino 500 Series	14th and 26th/2th and 6th
—	2008	Canceled	—	—	—
17	2007	Lisbon - Dakar	7,915	Hino 500 Series	9th and 13th/ Champion (only champion was recognized)
16	2006	Lisbon - Dakar	9,043		5th and 7th/No class competition
15	2005	Barcelona - Dakar	8,956		2nd and 6th/ Champion (only champion was recognized)
14	2004	Clermont - Ferrand - Dakar	10,411		5th/No class competition
13	2003	Marseille - Sharm El Sheikh	8,602		5th/No class competition
12	2002	Arras - Madrid - Dakar	9,440		3rd/ Champion (7th consecutive class championship)
11	2001	Paris - Dakar	10,873		2nd/ Champion
10	2000	Paris - Dakar - Cairo	7,880		5th/ Champion
9	1999	Granada - Dakar	9,441		4th/ Champion
8	1998	Paris - Granada - Dakar	10,570		2nd/ Champion
7	1997	Dakar - Agades - Dakar	8,051		Champion, 2nd, and 3rd/Champion, 2nd, and 3rd (First sweep in the truck category)
6	1996	Granada - Dakar	7,579		6th and 11th/ Champion and 2nd
5	1995	Granada - Dakar	10,067		2nd/No class competition
4	1994	Paris - Dakar - Paris	13,398		2nd/No class competition
3	1993	Paris - Dakar	8,877		6th/No class competition
2	1992	Paris - Sirte - Cape Town	13,015		4th, 5th, 6th, and 10th/No class competition
1	1991	Paris - Tripoli - Dakar	9,186		7th, 10th, and 14th/No class competition (First entry by a Japanese truck manufacturer)



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HINO's Dakar Rally Site: <http://www.hino-global.com/dakar>



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