



Bengaluru → Surat

Horns speak intentions

At last, the Indian and Southeast Asian stage of the 5 Continents Drive Project had begun. Nine cars and trucks carrying the team members left Toyota Kirloskar Motor (TKM) plant in Bengaluru and headed for their destination of New Delhi. The first day the team made it to Madikeri. India's culture and traffic rules are very different from Japan's. The team members seem a little perplexed by India's traffic. The road surface conditions change every few kilometers, other cars force their way past you, and people and animals (dogs, goats,

horses, and cows) cross the street unexpectedly. Yoshikazu Sahara of the Advanced Vehicle Engineering Development Division, who is serving as team captain, comments, "*I want to build relationships with the team members, who come from other countries and work in other professions, so we can talk about anything.*" When asked about driving in India, he says with a laugh, "*The horns seem to have emotions.*" The different sounds convey intentions, like "*I'm going to pass you*" or "*I'm going now.*" If you know the intention behind the sound, you get the strange sensation that you are listening to cars

having a conversation.

The road from Madikeri to Davanagere went through narrow mountainous sections, cities, and farmland. The climate also changed dramatically, as if the four seasons had been compressed into one day. Koji Inoue of the Production Engineering Department, Company Management Division, says with a grin, "*We had cows walking around the Oki Islands in Shimane Prefecture where I come from, too.*" He seems to be adjusting to the chaotic conditions in India. "*One street in India will have a mix of mobility of different speeds and sizes. There are a lot of potholes and speed bumps too, with*

hardly any traffic lights or white lines to follow. There are very few roads that are just for cars, and in many cases the roads are unpaved because of construction projects to expand them. But even though it should be difficult to drive, people still manage it. I think it's because people's behavior is based on a shared understanding." When the team had driving training, the TKM trainer told them, "*Japanese people drive with the mindset of 'You first,' but in India it's 'Me first.'*" The most important thing in an environment filled with diverse conditions is to clearly communicate your own intentions, and having drivers and pedestrians both respect the other's intentions. Inoue had found order in the chaos of India's driving environment.

For people delivering cars in the future

The road to Kolhapur was the first Indian highway the Drive Project members drove. While it was a highway, there were still motorcycles and auto rickshaws driving the wrong way on the shoulder, and people as well as horses

and cows walking along the road. Wataru Sato of the Assembly Section No. 1, Tsutsumi Plant Final Assembly Division, seemed to enjoy the chaos. Suzuki cars boast a 50% share of the Indian market and are frequently seen on the road. "*Indians must want compact and reasonably priced cars,*" he comments. But if cars are only compact and cheap, they won't be able to keep driving on India's tough roads. "*In addition to being compact, they also have to have good maneuvering and acceleration. People need to speed up quickly, especially at intersections and on highways. And Indians are also concerned about fuel economy. It seems like hybrid cars would have good potential.*"

The road the team took from Kolhapur to Navi Mumbai was mostly

highway, and no one is surprised to see a motorcycle going the wrong way. "*While you can't judge India by Japanese standards, there is a solid framework that has been built up here. It may have something to do with India's history as a multi-ethnic nation,*" comments Atsushi Yui from the Powertrain Product Planning Division. Yui brought up the potential of artificial intelligence (AI). "*I think it would be interesting to train an AI engine designed for reciprocal information sharing in this land. For example, the AI engine could learn about the road surface conditions from the car driving in front of it and from past driving data to operate the shock absorbers. If it did that, it could modulate the damping force and achieve a quiet interior environment*





with minimal shaking." When I mention how the emergence of AI has sparked a discussion about whether the fun of driving will be lost, Yui shakes his head. *"When AI evolves, we can enjoy watching the car grow. That is the 'love of cars' that Toyota President Akio Toyoda talks about. We might have additional new things to look forward to with our cars. And if our cars are trained in India, they will be able to drive anywhere in the world."* (laughs)

Flesh and blood communication

The Drive Project members drive north on national route 48 (Asian Highway 47) heading for Surat. India's rainy season is between June and September, and heavy rains have been falling for several days. With the heavy rains cutting off visibility, the team used its headlights and hazard lights, sometimes driving at speeds around 40 kph to reach Surat.

Many of the members of the 5 Continents Drive Project work in engineering and technical occupations.

Something that Shota Oshima from the External and Public Affairs Division is looking forward to is the post-drive debriefings, where he gets to have discussions with these team members. *"Some of the team members are involved in programming and work on engines and noise. I've gained some specialized knowledge in the discussions. That is the greatest benefit for me."* Oshima makes communicating what people are thinking in R&D and manufacturing genba his ongoing challenge in his work. He says he wants to continue learning about these priorities and have more conversations with engineers and technically minded people to create *"communication with flesh and blood."* The reserved Oshima states with firm resolve, *"Some people may see the 5 Continents Drive Project as a type of tourism. But I can say that the Toyota cars that have experienced the 5 Continents Drive will become better cars."* His experience here should bring more *"flesh and blood"* reality and passion to his work. And help him communicate the fun of mobility. Next week, the team will head to New Delhi over five days.



Distance:	1,549km
Duration:	September 16-20, 2019
Days:	5 days
Vehicles:	Innova Crysta, Fortuner, Camry HV, Innova Touring Sport, Glanza, Yaris, Land Cruiser 200, Suzuki Vitara Brezza, Corolla Altis