A Message for the Keihin Technical Review Vol. 7

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Already seven years have passed since the Keihin Technical Review was first published, and we are now issuing Vol. 7. I would like to express my deep thanks to everyone for their support and cooperation, and will here say a few words to mark the publication of the current issue.

It is fair to say that during the past seven years, the environment surrounding the automobile industry has changed more than anybody imagined. In the past few years, much attention has been given to the technical area known by the acronym CASE, which includes the shift to electric vehicles, automated driving, security, and connectivity. In my own past experience as well, there have been several changes in the environment which at the time were thought to be extremely difficult to achieve. With the LEV and CAFÉ regulations for example, we are moving towards control requirements with a completely new level of precision, as well as increasingly complex engine structures. These were issues on which the engineers of the time expended immense effort and creativity to overcome. However there has so far been no real question about the continued existence of the internal combustion engine. Because our company’s business today continues to be centered on products related to internal combustion engines, these are all keywords that will have a large effect on us. If we stick to our existing operations, we will lag substantially behind competitors. At the same time, if we are able to correctly recognize the coming changes, and deliver top-grade technologies to the customer as quickly as possible, these circumstances can also produce great opportunities for us.

Little attention has been given to the fact that the field of internal combustion engines is in fact now entering a period of revolutionary change. Although emissions problems seemed to fade somewhat in the 2000s, with the enactment of RDE (Real Driving Emissions) and other changes following the “dieselgate” scandal, the level of emissions cleanliness required in internal combustion engines has suddenly become much stricter, and development of new technologies is essential. In addition, as the costs of completed vehicles are rising as a result of the combinations with electric motor units, in order to reduce these costs an extremely difficult cost level is now required for the engine – one of the areas with the highest unit cost. Therefore we must recognize that as engine components, the cost performance level that is expected from some of our products is extremely high. This means that we must now simultaneously work for advanced programs in technical areas which are new to us, while also pursuing cost performance on a whole new level in our existing areas of strength.

In order to achieve a breakthrough under these conditions and achieve our mission statement of “contributing to the future of mankind”, I believe that there has never been a time when “always creating new value” was as necessary as it is now. Our company has for many years produced high-
value products in the field of internal combustion engines. Our company was also among the first to incorporate electrification technologies, delivering superior products ahead of our competitors. However in the past we primarily conducted our business in the style of working with the customer to develop and manufacture new products that meet the customer requirements. In order to succeed in a turbulent future, we must predict what will be needed before the customers know it themselves, and must conduct rapid development so that the customers will continue to choose our products. What we need for this purpose is keen insight and product development strength backed by a high level of technical abilities. These are not attributes that we can learn in a classroom; we will only acquire them through daily activities aimed at achieving high targets. At the same time, we also must learn more from a greater number of failures, and this requires experience. We must not fear failure; we can both achieve a high level of results and gain experience only if we repeatedly challenge ourselves to achieve high targets at early stages of development. I believe that if Design, Production, Purchasing, and Sales join together in these efforts, we will be able to achieve our mission statement.

It is my fervent wish that this review can be a stimulus and a source of information for this purpose, and that a greater number of engineers will produce results by engaging in more challenging levels of technical development.