

New Year's impression

Japan land and engine manufacturers association
Masatoshi Kimata, Chairman

The New Year Remarks [Jan. 12th Wed. 2022]

I am pleased to extend our best wishes to all for a happy and fulfilling 2022.

First of all, last year's summary, COVID-19 has greatly affected economic activities and the life of citizens around the world. In Japan, taking the example of Tokyo, the state of emergency was declared for 221 days during the nine months from January 8th to September 30th, and I believe many of you were forced to change your lifestyle and working style. In October, the momentum of domestic infections has finally slowed down, and we see some signs that life and working styles will return to normal. But it seems that the situation is still unpredictable due to high infection ratio abroad and the emergence of new variant.

Since the former Prime Minister Suga declared "Carbon Neutrality in 2050" in October, 2020, discussions on the decarbonization have been rapidly increasing in Japan. The decarbonized society cannot be realized simply by replacing the internal combustion engine with a battery-powered motor. There are three main scenarios required. The first scenario is the decarbonization of fuel, and it is necessary to convert the energy source required by society to energy that does not contain fossil fuels, such as hydrogen and renewable energy. The second is the reform of energy utilization technology, which needs to maximize energy conversion efficiency and minimize energy consumption (CO2 emissions) including manufacturing, disposal or recycling processes. Thirdly, it is necessary to develop and spread the technology to capture, store and reuse the carbon that is inevitably emitted even if the first 2 scenarios have been executed. Neither technology is straightforward, but in order to transform the petroleum-based energy system that Rockefeller pioneered 150 years ago into a completely different energy technology, including internal combustion engines, will be needed.

Next, I would like to introduce the production results of land-use engines handled by our association last year. The association publishes monthly production status on its website. Two years ago, in 2020, the total production volume, including domestic and overseas, from January to December 2020 was 11,625,907 units. Last year, the total production from January to September 2021 was 10,562,631 units (121% compared to the same months of the previous year). The breakdown was 8,874,843 gasoline engines (120% year-on-year), 1,623,911 diesel engines (132% year-on-year), and 63,877 gas engines (104%

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year-on-year). If production continues as it is, the total production volume from January to December 2021 is expected to be 14,083,500 units (121% year-on-year). Reasons for these demand recovery include high construction machinery demand due to infrastructure investment policies in China and the United States, emergency generator demand due to domestic government subsidies, and for consumer use, stay-at-home demand in gardening equipment in Europe, the United States and Japan.

And now, as for the scenarios to achieve carbon neutral, which I introduced at the beginning, it is aimed to install batteries in most of the automobiles. But we believe that the use of biofuels, e-fuels, and carbon-free fuels such as hydrogen and ammonia is indispensable in heavy vehicles which require a large amount of energy, and in construction machinery and agricultural equipment which is commonly used where energy supply environment is not ideal. LEMA will share and publish information with its members, related organizations, universities, and research institutes toward the carbon neutralization of internal combustion engines, and we ask for your continued support.

Last but not least, I would like to express my sincerity from the bottom of my heart that this year will be a good year for all of you, and wish you all the best for your continued growth and happiness.