

Development Project of Ultra Low Emission DME Heavy-Duty Truck

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In Japan, a variety of measures to control air pollution have been implemented, such as the strengthening of automotive emission regulations. However, the air pollution situation remains as bad as ever, particularly in major metropolitan areas, due to nitrogen dioxide (NO₂) and suspended particulate matter (SPM). The particulate matter (PM) and nitrogen oxides (NO_x) emitted by heavy-duty diesel trucks are especially high contributors to the SPM and NO₂ in roadside air quality. For that reason, reducing the amounts of PM and NO_x emitted by heavy-duty diesel trucks has become an urgent issue, as has the development of ultra-low-emission heavy-duty trucks that can replace heavy-duty diesel trucks. In April, 2002, Japan's Ministry of Land, Infrastructure and Transport started a project to develop the next-generation environmentally friendly heavy-duty trucks with both low emissions and good fuel consumption. Under this project, a prototype of a heavy-duty dimethyl ether (DME) truck (in GVW 18-ton class) will be made with PM and NO_x emission-free and output, fuel consumption, and driving range equal to those of a conventional diesel truck. During the project, its performance will be evaluated, and the feasibility of the DME heavy-duty truck will be studied by March 2005.