Nissan Diesel has built an environmentally-friendly distribution system to reduce CO_2 emissions.

Rationalization of Distribution Systems

Activities to Reduce CO_2 Emissions

Based on the data in fiscal 2006 annual ton-kilometer logistics report in accordance with the amended Energy Conservation Law that became effective in FY 2006, Nissan Diesel has been designated as a specified shipper of the law in June 2007.

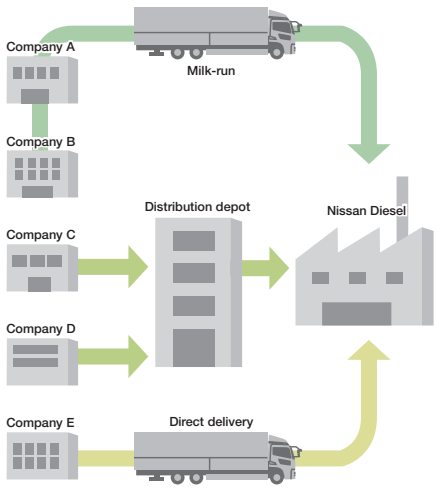
Following designation as a specified shipper, Nissan Diesel submitted its FY2006 performance report to the Japanese Ministry of Land, Infrastructure, Transport and Tourism in September 2007. Since FY2007, Nissan Diesel has been obliged to reduce an average 1% of CO_2 emissions each year over a medium to long-term period of 3-5 years. Nissan Diesel is taking action to fulfill this requirement.

Hitherto, activities to enhance the efficiency of distribution systems have focused mainly on reducing distribution costs. Currently, to respond to the revised Energy Conservation Law, Nissan Diesel is also actively taking action to reduce CO_2 emissions in all areas of its distribution network, including transportation between plants, transportation of procured parts, completed vehicles, knocked-down (KD) parts, and spare parts (SP), as well as of industrial waste. Nissan Diesel is committed to help prevent further global warming through these initiatives.

Transporting Parts Between Plants More Efficiently

We are using the modal shift concept to improve the efficiency of transporting parts from distant suppliers to our assembly plants. Using trains and ships instead of trucks yields significant reductions in CO_2 emissions generated by transporting parts to our facilities.

Container transportation by Japan Railway



Milk-run
Consolidated shipping by picking up and delivering items from multiple business partners at a time.

Via distribution depot
Consolidated shipping by collecting items at a distribution depot

Direct delivery from the parts manufacturer

Higher Transportation Efficiency for Parts Procurement

Nissan Diesel has used the “picking-up system,” which is a joint transport system of the Nissan Motor Group for the transport of parts. Starting in fiscal 2007, this joint system has been extended to include Nissan Diesel suppliers.

The expansion of the “picking-up system” has led to use the “milk-run” system which collectively handle small volume deliveries of parts by individual suppliers, and also centralize shipments at distribution depots. The results of these initiatives are evident in increased transportation efficiency and reduced CO_2 emissions.

Another initiative is improving the style of packing for parts shipments in order to use shipping container capacity more efficiently and reduce the volume of containers that are shipped empty. These steps to reduce the volume of shipped cargo help boost distribution efficiency.

Transport of parts for assembly

Returnable Containers for KD Packaging

For the distribution of KD components to overseas plants, we have switched from disposable to reusable packaging, a move that lowers the amount of wastes.

In order to switch completely from disposable to recyclable containers, Nissan Diesel developed steel returnable containers and began using them in Thailand and Indonesia in FY2007. New containers were further developed in FY2008 for shipment to South Africa. One example of these is a container that enables extremely efficient loading and unloading from both the top and the side, thus facilitating its usage for both marine and road transport.

To further reduce wood waste during the packaging of large parts, Nissan Diesel developed a foldable pallet that can be used for both light-duty and medium-duty truck cabins. This has reduced the amount of wood used for the transport of light-duty and medium-duty truck cabins by 400m^3 annually.

Pallet for shipping KD components

Pallet for KD medium-duty truck cabin

Environmental Measures for Spare Parts

For many years, we used boxes for almost all shipments of spare parts. In fiscal 2005, we started replacing boxes with foldable containers that can be used many times. We now utilize returnable packaging for shipments to 178 of our 192 sales bases in Japan, raising the utilization rate to 93% in fiscal 2007. At the Gunma Parts Center, the use of boxes declined by about 6%. Furthermore, the reusable containers have reduced waste at sales bases.

Since 2008, we have been concentrating on reducing the use of wood shipping crates, lowering the volume of industrial waste at bases in Japan and overseas and strictly complying with environmental laws and regulations.

Foldable and returnable container

Cardboard box←Wood box

Transporting Finished Vehicles More Efficiently

We have gradually switched the long-distance transport of finished heavy-duty and medium-duty trucks from by driving to by ship, working on lowering CO_2 emissions by raising the percentage of marine transport from Hokkaido in the north to the Kinki, Chugoku, Shikoku and Kyushu regions in western Japan.

Concerning transportation, some of the vehicles have been installed with GPS, which recorded data for analysis to check for speeding, sudden acceleration, abrupt steering, and other potentially dangerous driving practices by drivers. Nissan Diesel provides drivers guidance on safe driving practices and encourages the enhancement of economical driving skills.

Marine transportation