

Farm and Industrial Machinery Consolidated Division

The engines complying with exhaust gas regulations (V3300)

The off-road exhaust gas regulations are becoming strict in the world.

At Kubota, we have been keenly promoting establishment of manufacturing and service system of the engines, as well as the introduction of the latest exhaust gas measurement equipment and the development of cleaner engines, prior to these regulations.

With the newest model, V3300DI(T) engine, we have adopted E-CDIS (Center Direct Injection System with 4 valves) and the peak torque external adjusting type fuel injection pump unit leading the competitors.

As a result, we have realized excellent performance in combustion with cleaner emission and compliance with the requirements of emission regulations of Japanese Ministry of Land, Infrastructure and Transport, U.S. EPA, and European Union to contribute to environmental conservation.



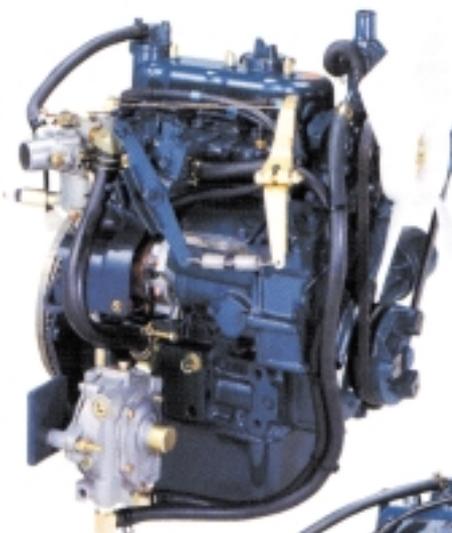
DF752 1005: Dual fuel engine (Gasoline and LPG) DF752 / 1005

In the United States, dual fuel engines are installed in aerial lifts operating back and forth between indoors and outdoors. Indoors they use LPG with cleaner emissions while outdoors they use gasoline that is more economical.

The EPA phase 2 stricter exhaust emission regulations including in-use regulation have started in 2001 for those engines.

Kubota realized human and environment-friendly engine and cleared stricter regulations by combustion improvement, such as special dual fuel carburetor development and combustion chamber modification.

We also developed a one liter displacement engine in addition to conventional 0.74 liters.



DF752



DF1005

Automatic vending machine for beverages in paper cartons (fiscal 2001 model)

Automatic vending machines are operating nigh and day, and they are now indispensable for people's life. Annual electric power consumption of whole Japanese automatic vending machines is eight billion kWh, approximately 80% of capacity of one nuclear power station.

We have realized saving energy of 14% (compared with our conventional one), top level in the industry, by active promotion of saving energy such as cooling system improvement, high-efficiency DC motor adoption and so on.

All types of our machines now use HFC that does not cause ozone layer depletion.

Thus our transition from the old refrigerant to HFC has already been completed.



Levee mower (GC-700)

Levee mower can do grass cutting on both upper surface (300 mm) and slope surface (400 mm) of levee simultaneously, and we have realized effective grass cutting which is heavy work in hot seasons, and saving of labor.

It is easy to cut grass on levee with various kinds of shape, and on ordinary agricultural roads by the mower.

So it is possible to stabilize rice crop while the crop is not suffered from injurious insects, whose nests around rice field can be removed by the mower, such as stink bugs, and so on.

It can keep rice field landscape beautiful.

And the mower is useful for environmental conservation because of less environmental load by reduction of herbicide.



Biological oil (Bio Green Grass)

Hydraulic oil "Bio Green Grass" with excellent biodegradability has been developed for global environmental conservation.

So if green machine or construction machine had an accident, spilling its oil on soil, or on lawn in the park or ground, and in the river, the oil could not pollute environment.

"Bio Green Grass" is hydraulic oil applying our original interfacial active agent technology for the first time in the world. It has also biodegradability, not letting lawn die in case of oil spill, in addition to basic performance as hydraulic oil. Additive blending technology, which was accumulated in the development of high performance lubricant for agricultural machinery, is also applied.

It was approved as Kubota's first Eco-mark product by Japan Environment Association.

