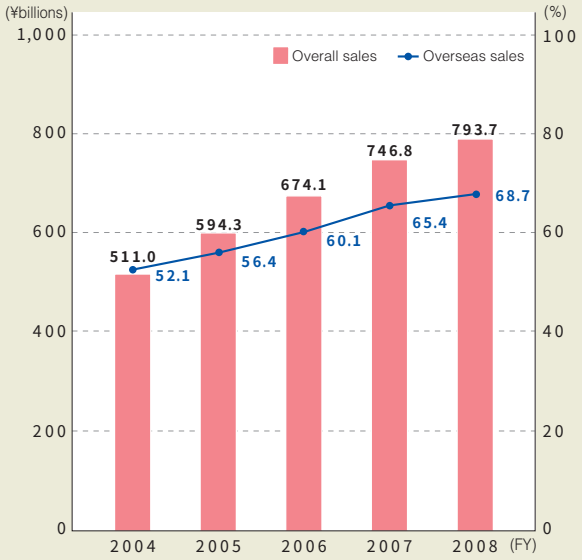
# Results by Business Field

## Internal Combustion Engine and Machinery Sector

This sector consists of farm equipment, engines, and construction machinery.
Revenues in the Internal Combustion Engine and Machinery sector were ¥793.7 billion, 6.3% higher than in the prior year, comprising 68.7% of consolidated revenues. Overseas revenues increased 11.6%, to ¥545.3 billion and domestic revenues decreased 3.9%, to ¥248.3 billion.
In overseas markets, sales of tractors, the Company's core product, increased steadily. In the United States, sales of tractors were at almost the same level as in the prior year while there were worsening subprime loan problems, the slowdown of the housing-related markets, and a serious drought in the southeastern region. In Europe, where favorable economic situations continued, sales of tractors showed strong expansion due to the active introduction of new products and aggressive promotional sales activities. In Asia outside Japan, tractors continued to report a large sales increase in Thailand where mechanized farming is rapidly developing.
As for construction machinery in North America, sales decreased due to the deterioration of the market, but sales in Europe reported a large expansion due to rising demand resulting from favorable economic situations and sales expansion of larger-sized products, which were introduced in the prior year. Sales of engines increased mainly due to steady sales in Europe. However, sales of farm machinery decreased due to a stagnation of the market for combine harvesters in China.
In the domestic market, sales of farm equipment decreased. Most farmers, centering on those with medium-sized farms, maintained the strong trend to hesitate purchasing farm equipment, while the purchasing intention among some farmers began to show signs of improvement affected by the partial revision of new government agricultural policies and the firming up of the price of rice. Under these circumstances, the Company actively implemented sales expansion policies to expand its customer base and was able to increase its market share; however, it could not overcome the effect of declining demand. Sales of construction machinery decreased due to stagnant demand resulting from the partial revision of Japan's building standard law. On the other hand, sales of engines increased steadily due to sales expansion to domestic manufacturers of construction and industrial machinery.

■ Trend chart of the overseas-to-overall sales ratio in the Internal Combustion Engine and Machinery Sector




## Joint venture tractor manufacturing company established in Thailand

KUBOTA president Hatakake and SCG president and CEO Kan Trakulhoon shaking hands at a press conference held in Bangkok

Thailand has taken a leading role in Southeast Asian agriculture and its market for new tractors has expanded due to the increased income currently enjoyed by farmers and the manpower shortages in rural areas, etc., all brought about by swift economic growth. Because tractors are operated under high temperatures throughout the year in Thailand, they require specifications that are simple, easy to maintain, tough at high temperature, and durable.

With the rapid increase in demand for tractors in Thailand, KUBOTA determined that it was immediately necessary to install a high cost-performance, local production supply base for tractors in addition to the backup product supply from Japan, and so "Siam Kubota Tractor Co., Ltd." was established in September 2007 in a joint venture with "Siam Cement Group" (SCG), a major corporate partially owned by the Thai royal family, to produce tractors for the Thai market. (Investment ratio: 60% Kubota and 40% SCG)
A factory with an annual production of 25,000 units is being constructed, production is scheduled to begin in March 2009, and The Siam Kubota Industry Co., Ltd. (SKI) will be handling sales. We are thus aiming at continuing expansion of our tractor business in Thailand, and at active business development that focuses on the rice farming countries of Southeast Asia.

## Machinery Dealers Meeting

"61st KUBOTA Machinery Group Dealers Meeting" was held at the Kyoto International Conference Center on January 16th and 17th and was attended by about 4,700 people including those from cooperating companies, exhibition visitors, and domestic agricultural and construction machinery dealers.

On the first day of the meeting, we announced our slogan for fiscal 2008: "Develop Robust Agriculture. Hasten Management Reform." In the ongoing harsh environment of the Japanese market, we called for each dealer to take a global view towards development and production; to develop and offer competitive products that will triumph over competitors through concurrent design with overseas models, combined use of parts, and global procurement; and to strengthen our competitive edge through further globalization and the concentration of all our energies.

On the second day, 138 different products, including 11 new models, were exhibited on-site in ingenious presentations.

Through declarations of strong determination from directors and persons in charge of each division to our dealers, through messages of support to Japan from overseas dealer executives, and through presentations on the main stage of the product exhibition site, the themes of "An Active KUBOTA Supports Active Agriculture" and "The Role of the Mother Market for a Global KUBOTA" were strongly conveyed.

General assembly for the KUBOTA Machinery Group Dealers Meeting at the Kyoto International Conference Center

Main stage

Exhibition hall

## 36 new KUBOTA tractor models simultaneously put on sale

71 models from the 9 series of domestic ride-on tractors and 36 models between 16.5 and 95 horsepower ["New KingBull" small-scale tractor, "Grand Kingwel" and " Grand Kingwel Beltion" medium-scale tractors, and "Super SynerZ" large-scale tractor] were all placed on the market for the first time together on July 1.

From small size to large, these tractors come fully equipped with functions for all customers who want their machine to enable agricultural work to be accomplished "more comfortably" and "more efficiently". Furthermore, our "Power Crawler" series of units that all boast minimal soil compaction was also marketed at the same time.

As the severity of the environment that encompasses Japanese agriculture grows, KUBOTA's agricultural implements and machinery send jolts of energy into the two realms of "activity", with a campaign aimed at reinvigorating agriculture in Japan, and "new products", with a scale of model restyling simply unheard of in the past.

Grand Kingwel
(22 to 34 HP, 14 models)

Grand Kingwel Beltion
(38 to 55 HP, 9 models)

New KingBull
(16.5 to 22.5 HP, 7 models)

Super SynerZ
(76 to 95 HP, 6 models)

## Introducing the DC-60: A combine harvester for export to Thailand

Meeting

Threshing drum

Standard combine hervester for Thailand

Combine hervesters in Japan are often of the “head-feeding” type, which suits the difficult-to-thresh (separate the rice kernels from the rice head) Japonica rice usually planted in Japan. However, because the Indica rice that is harvested in Thailand is easily threshed, a standard type of combine is usually employed there.

Developed in Japan, produced in China (KAMS), and sold in Thailand (SKI). The DC-60 is a standard-type combine harvester made for Thailand out of a joint 3-country project, a rare event even at KUBOTA.

Thailand has as much as six times the area in rice fields as Japan does and has often been called the “rice bowl of Asia”, but there is a large difference in production between the central part and the northeastern part of the nation. Because the center of the country is warm all year round and has abundant water sources, harvesting is possible up to three times a year. Each rice field is also quite expansive, with large combine hervesters of eight-ton or more being used on average. On the other hand, northeast Thailand basically offers a single annual crop and is affected by various issues such as irrigation. Because the sectioning of the rice fields is narrow and large-scale combine hervesters just do not fit, mechanization is not very advanced. In order that it might respond to these specific needs of the country’s northeastern region, the DC-60 was developed under the concept of delivering “high performance in a compact design (about 2.5 tons) and at a low price”.

Though the market in Thailand is quite attractive, it is often difficult to launch a product if its production cost is not half that of Japan. So, we aimed at halving the number of parts and halving the cost without losing the same level of durability and performance. Because rice plants in Thailand are relatively fibrous and stiff, various troubles have appeared, such as parts wearing out long before their estimated service life, but the tenacious efforts of everyone involved, including SKI and KAMS, have born fruit, and we have been successful at cutting both parts and cost in half.

The threshing loss with large-scale units sold locally often reaches 10 to 20%, so the “3% threshing loss” performance of the DC-60 also grabbed the attention of the locals and resulted in high praise from farmers.

## V3307-T vertical water-cooled diesel engine developed

KUBOTA’s V3307-DI-T diesel engine, developed to be compliant with U.S. Tier III nonroad emission regulations, adopts a new type of structure that enables larger displacement, higher output, lower noise, and lower vibration in the same physical form as conventional 2.2 L class engines. In addition to its compact size and excellent reliability and durability, this next-generation industrial diesel engine answers a wide range of needs for agriculture-industrial-construction machinery, such as maintenance accomplished all from the same side.

* The V3307-DI-T 3.331L is a 4-valve, direct central injection turbocharged engine.

V3307-DI-T diesel engine

## A new-type cabin developed for greatly improved comfort

– Standard in the Grand Kingwel Series tractor –

One major characteristic of this new cabin type is its original design that places the air conditioner at the rear of the ceiling. With this layout, the height of the ceiling was raised and the view forward greatly extended. Even though we adopted a unit that excelled in its air-conditioning capacity, the changes required to effectively implement this layout design were not easy to achieve.

First, there was the problem caused by the air needing to make a U-turn to reach the operator (see the illustration). At first it wasn't easy to secure a sufficient amount of airflow to be indirectly conveyed to the operator and air-condition the cabin, but various concepts and experiments based on the latest in fluid analysis were attempted, and we were ultimately able to realize the optimal flow of air for this application. And through this challenge we were also able to accrue technology related to controlling air movement.

Second, was the new cabin structure required in order to change the installation position of the air conditioning unit. Frame strength was analyzed using full-3D design through state-of-the-art digital technology, enabling us to develop a superior new cabin design in a short period of time, and steadily accumulate the ability for faster development.


On top of that, the KUBOTA-original mounting structure for this new type cabin affords greatly improved quietness for a higher level of operator comfort, and this restyling has resulted in a steady increase in both our sales and market share numbers. We aim to design this cabin for other models in the future as well, and develop highly competitive tractors with a more attractive cabin in order to strengthen the KUBOTA brand and even further increase our share of the market.

## Simultaneous launching of the "ZEPH" series

Restyling of 21 models of mini-excavators, wheel loader sand carriers

On April 1, KUBOTA began marketing our "ZEPH series" small-scale construction machinery that comply with the exhaust emission regulations in the "Off-Road Law*" and the Ministry of Land, Infrastructure and Transport's "Exhaust Emission Tier 3 Standards". Due to the "Off-Road Law" coming into force in October 2007, we began the simultaneous sale of all our small-scale construction machinery (output between 19 and 37 kW) in advance of that as a new product line that cleared the corresponding reference values.

By also improving the displacement of the engine to 1647 cc from the previous 1499 cc for 3-ton class machines, we were able to maintain low noise and low vibration, enable high-power work at greater output, and improve durability and maintenance as well, all at the same time. More of KUBOTA's original, advanced-level functions than usual come standard with this series, such as the "SS key" antitheft device, an automatic evasion system to prevent the bucket from interfering with the operator's seat, and LCD displays with self-diagnosis function. And we are also aiming at further improving our environmental impact by promoting the diffusion of machines that comply with current emission regulations.

Mini-excavator

Carrier

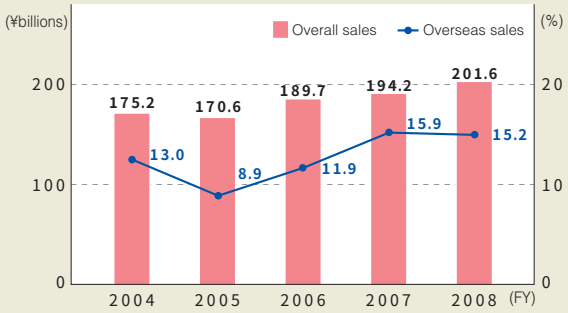
Wheel loader

* Regulations enacted in October 2006 in order to control emissions such from construction machinery (special off-road motor vehicles) that are not operated on public roads.

## Pipes, Valves, and Industrial Castings Sector

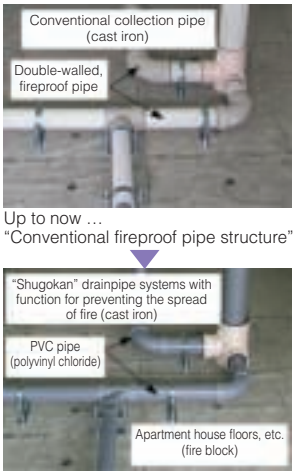
This sector consists of pipes, valves, and industrial castings.
Revenues in the Pipes, Valves, and Industrial Castings sector increased 3.8%, to ¥201.6 billion, from the prior year, comprising 17.5% of consolidated revenues. Overseas revenues decreased 0.8%, to ¥30.6 billion, and domestic revenues increased 4.7%, to ¥171.0 billion.
In overseas markets, sales of industrial castings for the steel and petrochemical industries continues to increase largely owing to high levels of private-sector capital expenditures, while sales of ductile iron pipes decreased.
In the domestic market, although demand for ductile iron pipes and plastic pipes was lackluster, sales of these products stayed at the same level as in the prior year owing to the price hikes of these products. On the contrary, sales of industrial castings increased substantially due to sales increases of ductile tunnel segments and products for the steel and petrochemical industries.

Trend chart of the overseas-to-overall sales ratio in the Pipes, Valves, and Industrial Castings Sector




## "Shugokan" drainpipe systems developed with a function for preventing the spread of fire

"Shugokan" drainpipe systems with function for preventing the spread of fire




In the future …
"New fireproof pipe structure"

The drainpipes that are made to wrap around apartments and other buildings become a convenient passage for flames and smoke in case of a fire. Conventionally, nonflammable material such as double-walled, fireproof pipe was used as a fire block to prevent fire from spreading, but KUBOTA came up with a completely new concept: a drainage collection duct that blocks the forked junctions of the drainpipe and intercepts the flame during a fire. In this way, the spread of fire can be impeded, and smoke intercepted as well, even if all drains are laid using less expensive (and combustible) PVC pipe.
This method has a dramatic effect on decreasing construction costs, improving the working environment, and also lowering the negative environmental impact of construction by reducing scrap, etc. This structure has received high acclaim for overturning the conventional thought of industry that double-walled, fireproof pipe is an absolute necessity in conduits.

## "TAMETERU-ZO", a disaster prevention header with a water storage function for new residential housing, put on the market

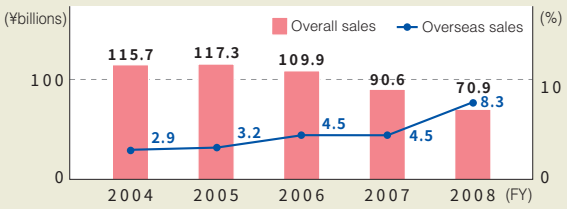
In February of 2008, KUBOTA-CI began selling "TAMETERU-ZO", a disaster prevention header with a function for storing 36 liters of potable emergency water in each home in preparation for such disasters as earthquakes.
This product is installed in the "dead space" above the ceiling in modular bathrooms, hallways, and closets, etc., where it won't affect the residents or the storage space of individual homes and apartment or housing complexes. By using one outlet (out of the 5 outlets installed to supply water to the kitchen faucet) for emergency water supply, potable emergency drinking water can be accessed by simply opening the kitchen faucet as usual even when the normal water supply has been cut off. Since this system stores 36 liters of water, it secures three days of emergency water for a family of four. Moreover, it functions as a "water supply header" (a kind of water supply tool) during daily life and, because a portion of the stored water is removed from two or more places whenever water is run from a faucet, the old water stored in the tank is constantly being replaced with fresh water.

TAMETERU-ZO

## Environmental Engineering Sector

This sector consists of environmental control plants and pumps.
Revenues in the Environmental Engineering sector decreased 21.8%, to ¥70.9 billion, from the prior year, comprising 6.1% of consolidated revenues. Overseas revenues increased 43.6%, to ¥5.9 billion, and domestic revenues decreased 24.9%, to ¥64.9 billion.
In overseas markets, sales of pumps increased substantially from the prior year.
In the domestic market, sales of water and sewage engineering products, waste engineering products, and pumps decreased due to the decline in public-sector demand and the drop in sales prices accompanying more-intense competition. In addition, the suspension of a designated pre-approved supplier that resulted from compliance issues and the discontinuation of a part of operations negatively impacted revenues of this sector.

Trend chart of the overseas-to-overall sales ratio in the Environmental Engineering Sector



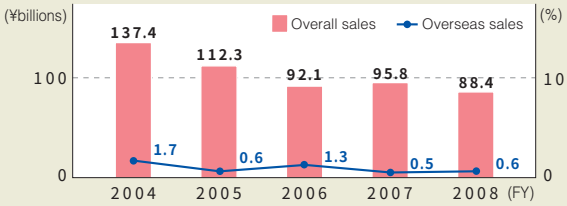

## Methane fermentation technology granted to ADI Systems Inc.

KUBOTA's original membrane methane fermentation technology that makes optimal use of the excellent features of membranes in liquid has increased our sales centered around domestic *shochu* makers. Up to now, the residue from *shochu* has been dried and made to animal feed, but the sudden rise in the price of crude oil has turned attention towards our methane fermentation technology and its ability to recycle energy.
In recent years, the production of bioethanol from corn for use as automotive fuel has expanded rapidly in North America. Because the waste fluid generated from manufacturing bioethanol is very similar to *shochu* residue, it is thought that this technology can also be applied to bioethanol waste. In September, we decided to grant the use of our proprietary technology to ADI Systems Inc. (Canada), which has its own know-how in the construction of large-scale food system wastewater management plants.

## Life Environment-Related Sector

This sector consists of vending machines, electronics-equipped machinery, air-conditioning equipment, construction, septic tanks, condominiums, and other business.
Revenues in the Life Environment-Related sector decreased 7.7%, to ¥88.4 billion, from the prior year, comprising 7.7% of consolidated revenues. Overseas revenues increased 2.2%, to ¥0.5 billion, and domestic revenues decreased 7.7%, to ¥87.9 billion.
Sales of vending machines increased due to a sales increase of cigarette vending machines that incorporate an age-identification function; however, revenues from construction and sales of air-conditioning equipment and septic tanks decreased. In addition, the sales of condominiums in the second half of the fiscal year were absent because shares of a subsidiary that conducted condominium business were partially sold and the subsidiary became an affiliated company. As a consequence, total revenues of this sector decreased from the prior year.

Trend chart of the overseas-to-overall sales ratio in the Life Environment-Related Sector




## "Coin Operated Rice Milling Machine" reaches 10,000 units sold

Our "Coin Operated Rice Milling Machine" went on sale in 1985. Because this automated vending-machine-type rice mill that can dispense brown rice and polish unhulled rice to the desired whiteness was quite a novel concept, sales numbers were sluggish at first. However, with the liberalization of the rice market in 1995, and the resulting expansion of routes by which even the average person could buy brown rice, we began to ship more than 800 units a year and reached our 10,000th unit on October 25, 2007. Recently, this product has attracted further attention for its contribution to the delivery of safe, health-oriented food.