

Kubota Engine Thailand (KET)

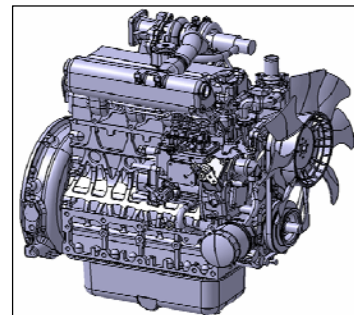
1. Outline

Address	No.360 Moo 3, T.Khao Hinson, A.Phanomsarakarm, Chachoengsao, 24120
Number of employees	395
Site area	75,856 m ²
Establishment day	24-Feb-11
ISO14001 certification date	3-Jul-2015
Site overview	Manufacturing of vertical type diesel engines



2. Products

Main products



Vertical type Diesel Engines

3. Environmental, Safety and Occupational Health Policy

KUBOTA Engine (Thailand) Co. Ltd (KET), a leading manufacturer of diesel engines for agricultural and industrial machinery recognizes the importance of environmental protection as well as the occupational health and safety of employees, local communities and society overall. The company, therefore, is committed to operate with the environment, safety and employees health in mind. Policies to support this operation as detailed in the following.

1. KET is committed to prevent accidents and occupational diseases by improving working environments which present an unacceptable risk of harm and strictly complies with the company's safety regulations.
2. KET is responsible to society by considering environmental impacts, which are caused by human activities, products including energy saving, as well as the reuse of resources, in its operations. In addition it will continue to protect the environment and prevent pollution.
3. KET has encouraged and supported employees to create a workplace in accordance with the 5S principles to improve operation, safety, and equipment maintenance as well as using an appropriate protective equipment to reduce accidents and prevent occupational diseases.
4. KET continues training activities to educate and create awareness on environmental, safety and occupational health to employees.
5. KET will continue to comply with legal and regulatory requirements related to the environment, safety and occupational health.
6. KET communicates to all employees about its environmental, safety and occupational health policy, including information on the implementation.
7. KET communicates to interested parties about its environment, safety and occupational health policy and accepts comments and complains.
8. KET continues to review objectives, targets, and results of overall operation on environmental, safety and occupational health for better improvement.

4. Environmental performance data (Jan. 2017 to Dec. 2017)

Used amount of energy	Crude oil equivalent KL	2,039
Used amount of water	thousand m ³	20

CO₂ emission*	tons CO ₂ e	4,209
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*CO₂ emissions from energy sources.

Air Pollutant measurement results				
Main smoke and soot generation facilities		Heating furnaces		
	Unit	Control content	Control value	Maximum measured
SOx	ppm	Concentration control	950	< 2
NOx	ppm	Concentration control	200	29
Particulate	mg/m ³	Concentration control	240	11

Amount of discharge water	thousand m ³	No external water discharge	
Amount of pollutant in discharge water	COD	kg	-
	Nitrogen	kg	-
	Phosphorus	kg	-

Water pollutant measurement results				
	unit	Control value	Maximum measured	
Treated water* (Recycled)	pH	-	5.5 ~ 9.0	7.2, 7.7
	BOD	mg/L	< 20	2
	COD	mg/L	<120	36
	Nitrogen	mg/L	< 100	7
	Phosphorus	mg/L	-	24
	Hexavalent chromium	mg/L	< 0.25	<0.10
	Lead	mg/L	< 0.2	<0.05
	COD, total emission control	kg/day	-	1
	Nitrogen, total emission control	kg/day	-	0.1
	Phosphorus, total emission control	kg/day	-	0.8
SS	mg/L	< 50	2	

Waste discharge	tons	294
Recycling ratio	%	93.5%

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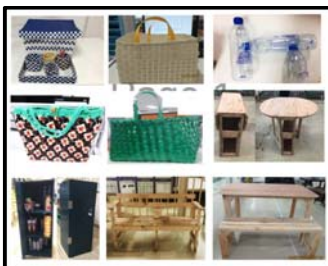
5.Environmental Topics

1. Water reduction - Improve Water Diffuser. - Improvement RO. Recovery rate. - RO. Reject water Improvement. - Watering tree system. - Water recycle to general washing.	Improvement RO.Recovery rate Before:  Recovery rate = 88.2% After:  Recovery rate = 93%		RO.Reject Improvement Before:  Reject 200PP After:  Reject 100PP		
	Improve Water Diffuser Before:  Water 4.22L/min After:  Water 3.82L/min		Watering tree system Before:  Watering tree = 32 ml/Min After:  Watering tree = 18.5 ml/Min		Water recycle to general washing Before:  Washing by city water After:  Washing by water recycle
Action Plan and Investment Investment: 2000000 Yen		Action Plan and Investment Investment: 2000000 Yen		Action Plan and Investment Investment: 1000000 Yen	

2. Electric reduction.
- Reduce electrical usage for coolant system.



3. Waste reduction
- Change general waste to RDF fuel. (Landfill --> RDF flues).
 - Promote 3R through 3R board.
 - Recycled invention.
 - Campaign and create awareness of separate trash.
 - Promote 3D board (separate trash).



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6.Environmental Communication

1. Environmental & CSR activity in Environmental Month 2017

On 23 September 2017 at Camillian Social Center.



2. Environmental & CSR activity in Environmental Month 2018

On 2 June 2018 at Bangpakong home for the disabled.



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3. Safety & Environment & Energy week 2018 (continued from page 2)

On 19 - 20 July 2018 at KET.



4. Environmental & CSR activity in Environmental Month 2018

On 25 July 2018 at Banchamkhwang school.

