

SOLID TO SUCCEED



Single-Drum Vibratory Roller

XS163J



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We will perform continuous improvement of relevant contents without notice.

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XS163J vibratory roller is a mechanically driven single drum vibratory roller independently developed by XCMG Group Construction Machinery Co. This product is suitable to the compaction operation of gravels, sandy soils, moraine soil and clayey soil, as well as the compaction of concrete and stabilized soil base materials in various large projects. It is the ideal compaction equipment for high-grade highways, airports, harbors, dams and industrial construction sites. This roller is suitable for altitudes $\leq 4000\text{m}$ and operating temperatures between -15°C and $+45^{\circ}\text{C}$.



Main Performance And Characteristics

1 Engine

- It adopts Shangchai H series, water-cooled, four-cylinder, four-stroke, turbocharged, low-speed diesel engine, with large power reserve, energy saving and noise reduction. The transfer case directly supplied by the engine manufacturer drives the hydraulic pump directly to reduce the use of mechanical transmission parts and failure possibilities. Engine fulfills the requirements of China stage II emission standards

2 Hydraulic vibration system

- Dual frequency and dual amplitude meet the requirements of different working conditions; The hydraulic vibration system consists of a gear pump and motor, forming an open-loop system. The control method adopts electric control, ensuring the vibration parameters meet the requirements and the reliability of the vibration system.

3 Vibratory drum

- Optimized vibration drum structure and vibration parameters guarantee smoother pavement surface and higher compaction efficiency.

4 Braking system

- It is equipped with both emergency brake and parking brake. Two sets of independent systems guarantee the reliable braking of the whole engine.

5 Cabin

- Streamlined modern cabin provides broad visibility for two meters away from the frame. Removable cabin with ROPS function ensures safety.

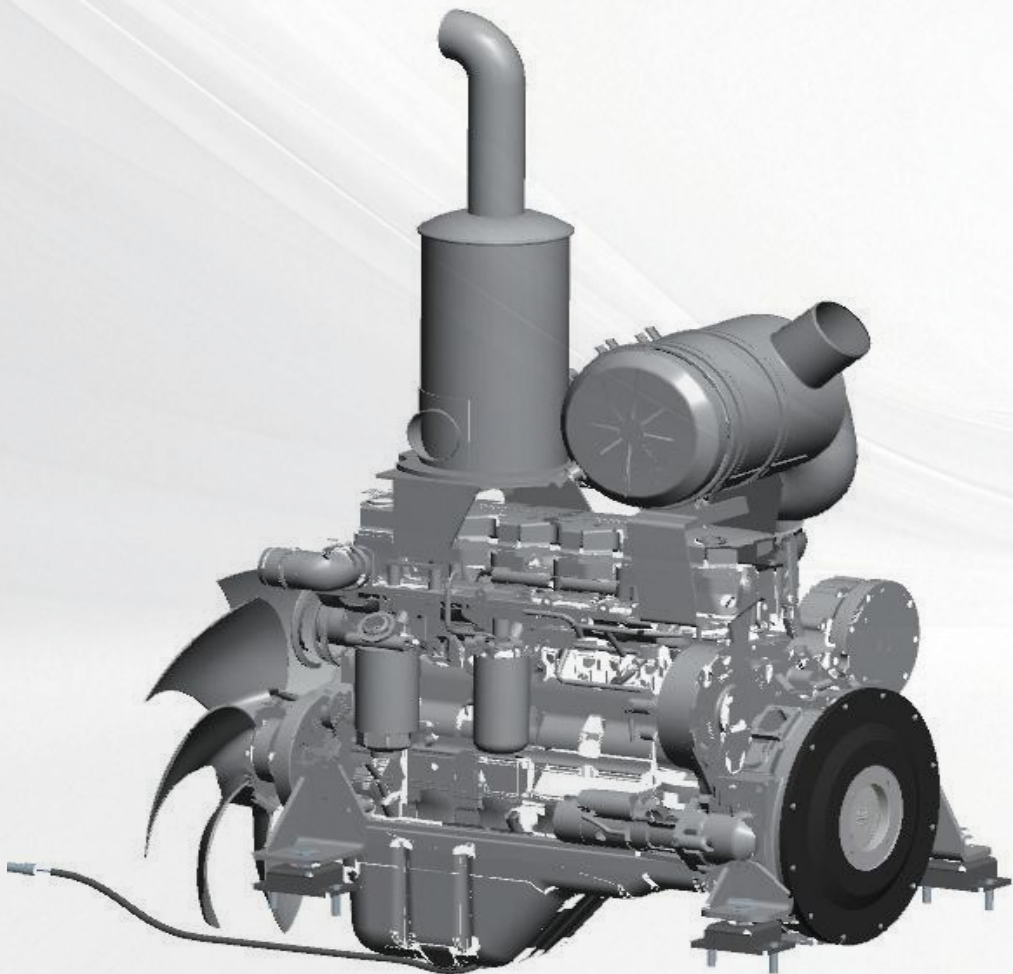
6 Engine hood

- Engine hood is the one-piece metal structure with arc slope and uses the single-bar supported and electronically controlled lifting device to guarantee convenient operation and stable lifting. Engine hood tilts forward largely and easily for access to each system part; Electric lifting device enables safe stop at any position.



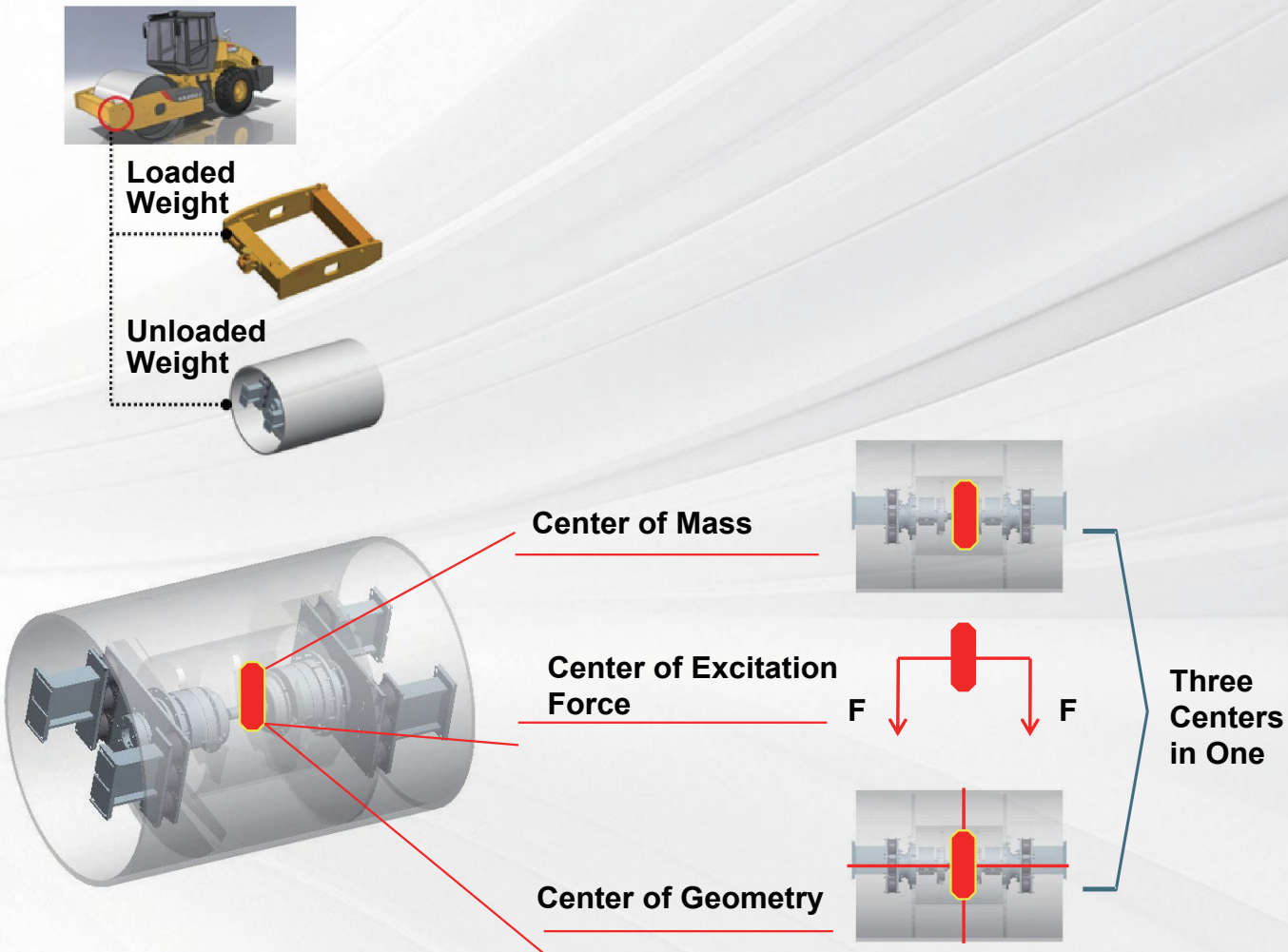
Economic and Environmentally Friendly

- Low speed engine, working in optimal fuel consumption area in commonly applications.
- H series engine uses four-valve + light weight technology, low fuel consumption.
- Frame anti-sway vibration technology saves vibration energy consumption.



Effective Compaction

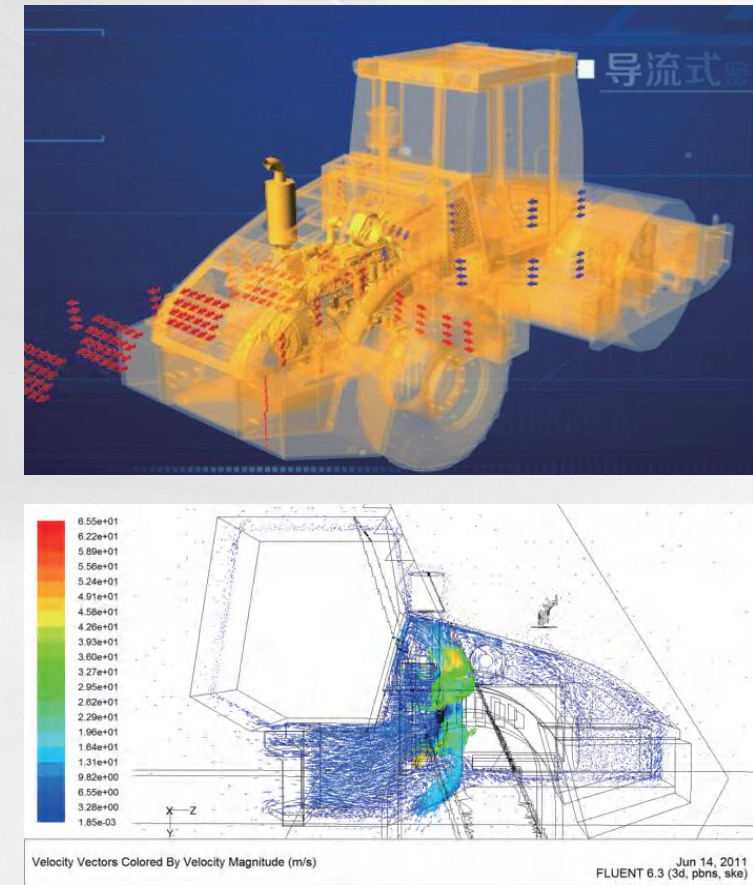
- The vibration drum has three centers: the vibratory mass center, excitation force center, and geometric center. These centers coincide to ensure equal amplitude of the drum at any point in the axial direction, improving both static and dynamic compaction efficiency.
- The center of excitation force can determine the optimal distribution ratio of upper and lower mass through theoretical analysis and extensive experimentation. This maximizes vibration energy transmission, ensures compactness and consistency, and improves compaction efficiency.



High-Efficiency Cooling

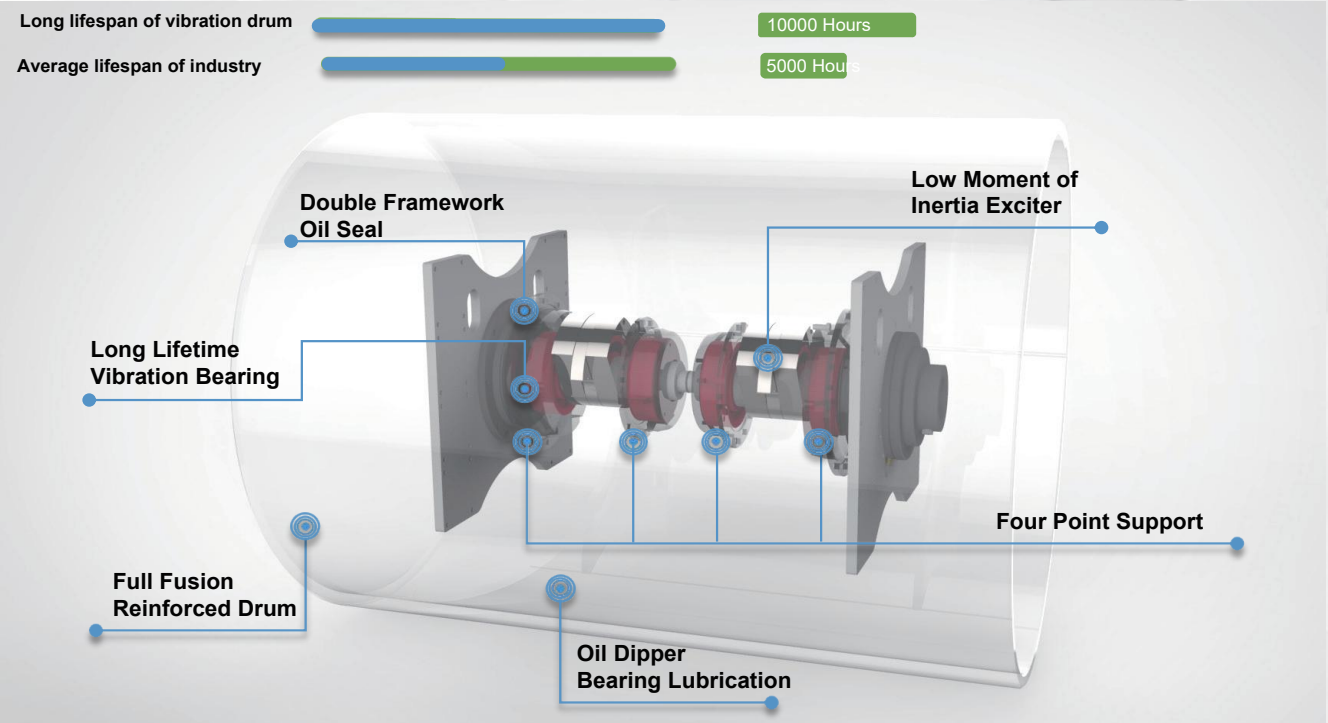
High-efficiency cooling technology, the product still has high-efficiency cooling performance under extreme working conditions.

- Engine compartment internal guide air duct technology
- Maintenance-free screen-type anti-clogging technology for radiator



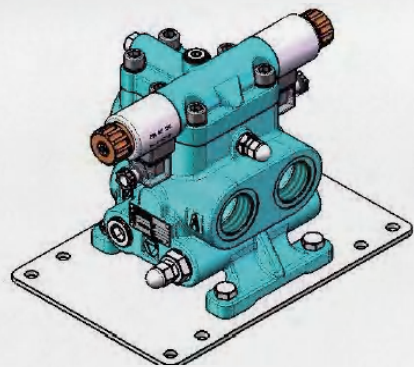
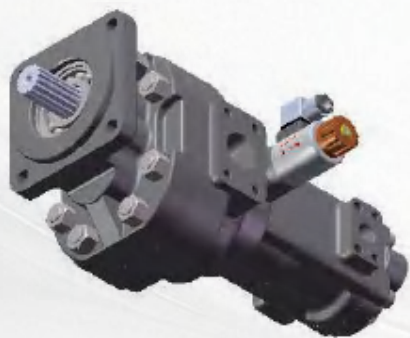
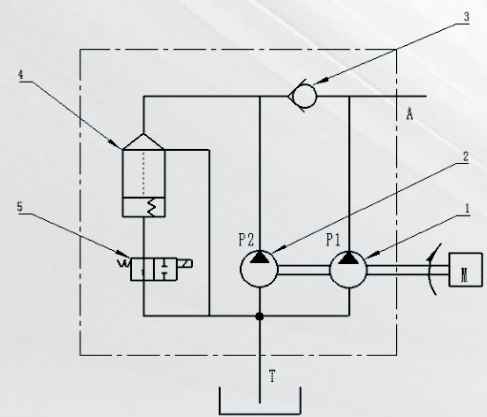
Long Lifetime Drum

- Based on XCMG's unique cylindrical four-support drum structure, the product adopts long-life vibratory bearings and oil-spoon lubrication and cooling, flexible positioning of the drive shaft, variable cross-section vibration damper, and low inertia exciter, which improve the life of the vibratory drum bearings, transmission, and vibration damping system, ensuring that the lifetime of the vibratory drum under normal working conditions is more than 10,000 hours, which is about twice as much as those of the competitors.



Open-Type Dual-Frequency Hydraulic Vibration

- XCMG's patented open hydraulic system consists of electronically controlled merging pump, vibration valve and gear motor, etc. The system has two main features:
- Electric control combined pump enables dual-frequency vibration for both high and low amplitudes, offering wider application and effective compaction for various materials and thicknesses.
 - The vibration valve is integrated with two-way damping stop-vibration valve to achieve fast stop-vibration effect. The starting and stopping time is controlled within 3 seconds, which improves the compaction performance and greatly improves the operating comfort.



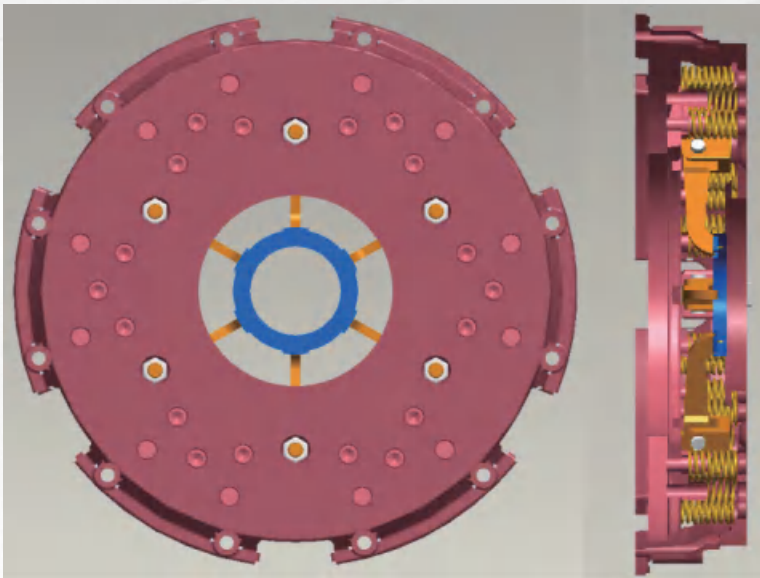
Diaphragm Spring Clutch

- Customized 395 high wear-resistant heavy-duty clutch with higher reliability.
- The industry is the first to adopt diaphragm spring instead of the usual coil spring and release lever mechanism.

Advantages of diaphragm spring clutch:

1. Simple structure and high reliability
2. No need to adjust the release gap frequently.
3. Lightweight operation.

Helical Spring Clutch Pressure Plate



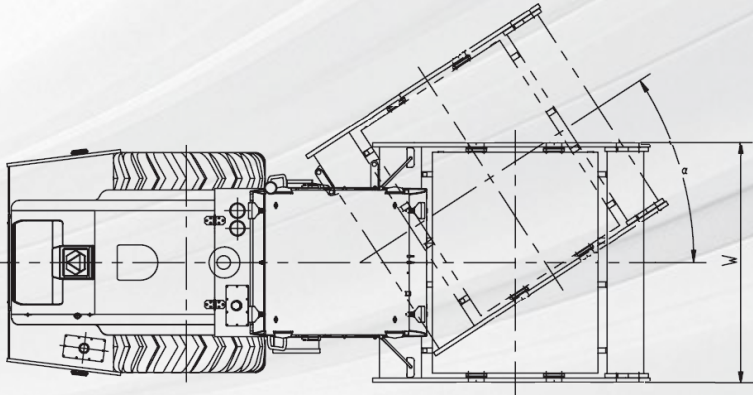
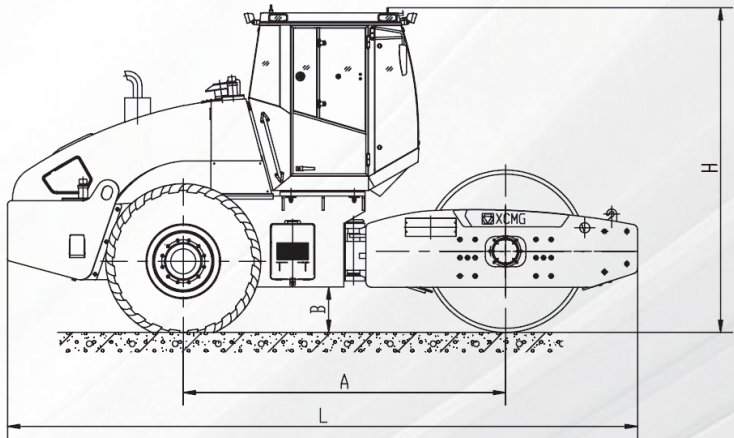
Diaphragm Spring Plate



Main Technical Parameters

Content			Unit	XS163J
Operating Weight			kg	16000
Rear Axle Weight			kg	8000
Front Axle Weight			kg	8000
Static Linear Load			N/cm	376
Vibration Frequency			Hz	28/33
Theoretical Amplitude			mm	1.9/0.95
Centrifugal Force			kN	290/200
Speed Range	Forward	I	km/h	2.93
		II	km/h	5.76
		III	km/h	12.2
	Reverse	I	km/h	2.93
		II	km/h	5.76
Wheel Base			mm	3076
Compaction Width			mm	2130
Theoretical Gradeability			%	30
Minimum Turning Radius			mm	6800
Vibratory Drum Diameter			mm	1523
Minimum Ground Clearance			mm	440
Engine		Model		SC4H140.1G2
		Rated Speed	r/min	1800
		Rated Power	kW	103
Overall Dimensions(L×W×H)			mm	6150×2300×3200
Pressure of Vibration System			MPa	18
Pressure of Steering System			MPa	16

Appearance And Dimensions



Model	L	W	H	A	B	α
XS163J	6150	2300	3200	3076	431	33°

Optimum services , XCMG Guaranteed



Cummins engine



Genuine parts



Extension of warranty



Financial solutions



Maintenance contract



Telematics



Monitoring systems

Professional Integrated Complete Solutions

XCMG group has built a strong reputation based on the quality, reliability and durability of its construction machinery.What’s more, XCMG has gradually established a service network to constantly provide its local integrated and highly efficient complete solutions for all users.

Full range of services ready for you

In order to respond to your needs as fast as possible, XCMG experts are on their way to your job site from one of our facilities near you. Full range of servivices are available in order to reduce your total cost of ownership and increase your revenue.

XCMG Global Spareparts System

XP305S Pneumatic Tire Roller

XP305S Pneumatic-Tyred Roller

BACK DRUM

FRONT DRUM

GAS-ROUTE SYSTEM

TRANSMISSION SYSTEM

BODY ASSEMBLY

HYDRAULIC SYSTEM

OPERATING SYSTEM

ENGINE SYSTEM

SPRINKLER SYSTEM

DRIVER'S CAB ASSY

CAB ASSEMBLY

CONTROL BOX

CONTROL BOX ELECTRIC

ELECTRIC SYSTEM

SCRAPER SYSTEM

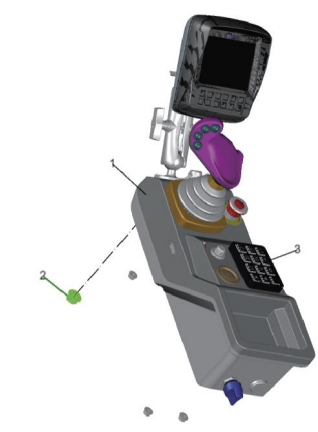
SHIELD FOR DIESEL ENGINE

OIL DRAIN SYSTEM

AC SYSTEM

MOUNTING ASSEMBLY

OIL SPILL SYSTEM



Number	Material Encoding	Name	Quantity	Handle
1	225794532	CONTROL BOX STRUCTURE	1	
2	895238400	NUT M6	4	
3	225794541	CONTROL BOX ELECTRIC	1	

HOME PAGE

PRODUCT DEBUGING

PRODUCT MONITOR

serviceSupport

Statistical

RESOURCE MANAGE

AUTHORITY MANAGE

SYSTEM MANAGE

APP MANAGE

APP USER MANAGE

EQP LINK APPROVAL

EQP TRANSFER APPROVAL

REPAIR ORDER

25438

Number of network equipment

233

Amount of work yesterday

390

Amount of work now

2907.3

Working hours yesterday

0

Access network today

0

Number of equipment fault alarms now

Overall OIL EQP OIL

30-day Data

Operating rate

Less than 30 hours

30-100 hours

More than 100 hours

Monthly Distribution of operating rate

Bar chart showing operating rate distribution

Satellite

Map of Africa and Europe with location markers

Monthly average working hours of main models

Bar chart showing working hours

Monthly workload of main models

Area chart showing workload

XP305S Pneumatic Tire Roller

XP305S Pneumatic-Tyred Roller

BACK DRUM

FRONT DRUM

GAS-ROUTE SYSTEM

TRANSMISSION SYSTEM

BODY ASSEMBLY

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ENGINE SYSTEM

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CONTROL BOX

ELECTRIC SYSTEM

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OIL SPILL SYSTEM

