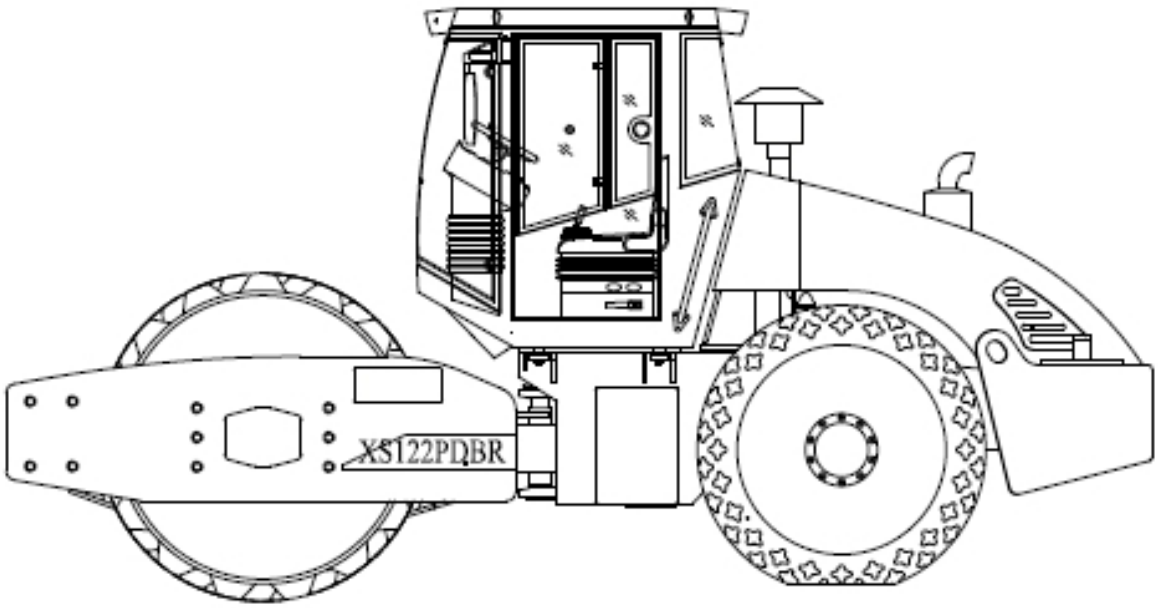
XS122PDBR COMPACTOR ROLLER

Portuguese - BR

OPERATION MANUAL AND MAINTENANCE



XCMG BRAZIL INDUSTRIAL LTDA

Preface

We at XCMG would like to thank you for choosing to purchase and use our compactor roller. vibratory of the XS122PDBR series.

Our experience, combined with the most modern production and testing techniques, including the test of The longevity of the parts and the highest quality standards help ensure the reliability of your machine.

This manual includes:

1 Safety manual

2 Operation manual

3 Maintenance and Repair Manual

4 Transport and Storage Manual

5 Technical specifications

- With the use of this manual, it will be possible:
- Gain a good understanding of the machine.
- Avoid damage caused by improper operations.

By using the machine according to the instructions in this manual it will be possible to:

- Improve machine reliability in the workplace.
- Extend the lifespan of the machine

XCMG will not be responsible for damages occurring in the following situations:

- If the machine is used incorrectly.
- If the machine is used for an operation outside its scope.
- If the machine suffers damage caused by force majeure.

The following situations are not within the scope of reimbursement:

- Incorrect operation.
- Falta de manutenção.
- Use of incorrect fuel and lubricants.

This manual is an important part of the machine. Read it carefully before operation, inspection and machine maintenance, especially safety precautions and operation instructions.

Any modifications made to the machine without authorization from XCMG may result in accidents. with serious or fatal injuries.

XCMG reserves the right to make modifications to the machine without any prior notice.

Você também pode obter informações a respeito da utilização correta da máquina entrando em contato com a XCMG or your nearest dealer.

XCMG is with you on the path to success!

Index

1. Safety manual

1.1 General provisions

1.1.1 Security is absolutely important!

During the machine design phase, our designers took into account their safety and that of their work colleagues in order to ensure the safety and reliability of the XCMG machine. However, the The biggest responsible for your safety is yourself.

The present safety manual provides warnings about safety issues that may be encountered. for you and your colleagues during the daily operation of the XCMG roller.

1.1.2 Points of attention!

This machine must be used under the following conditions:

- Only for the compaction of the base layer of roads and earthworks.
- When the equipment is complete and secure.
- The machine must be inspected periodically by qualified service technicians.

Never use the machine under the following conditions:

- With an unqualified operator.
- In flammable environments.
- For operations with vibration on rigid pavement or concrete surface.
- Near dangerous structures.

1.1.3 Read this manual in full, especially the symbols and safety warnings.

Description of safety symbols

	**This security alert symbol identifies important safety information in this manual. When you see this alert symbol, read carefully and follow the information presented, in addition to informing them to other operators.**

Description of the classification of safety symbols.

 **Danger**	**This symbol indicates a situation that, if not avoided, will result in injuries. serious or fatal.**
 **Notice**	**This symbol indicates a situation that, if not avoided, could result in injuries. serious or fatal.**

Attention	**This symbol indicates a situation that, if not avoided, will result in minor injuries. or moderate.**

1.2 Safety instructions

1.2.1 Before operating the roller, the operator must be familiarized with the content of the Operation Manual (figure 1-1).

Figure 1-1

1.2.2 Carry out the operations strictly in accordance with the procedures described in the operation and maintenance manuals repair, transport and storage.

1.2.3 Only trained operators are authorized to operate the roller. compactor. The presence of other people is not allowed in machine, besides the operator, during the operation of the machine.

1.2.4 Do not use the machine on high-density materials with high vibration, such as cement or asphalt.

1.2.5 Do not perform maintenance or repair operations while the compactor is in operation.

1.2.6 Get on or off the roller only when it is stopped, and always support yourself on handrail to properly go up and down the machine.

1.2.7 When driving the machine on unfamiliar roads, make sure that the ROPS protection is installed.

1.2.8 Reduce the speed of the machine when making turns with the compactor.

1.2.9 Avoid operating the machine across slopes. When possible, operate with the machine going up and down the slopes.

1.2.10 When approaching shoulders and depressions, make sure that 2/3 of the roller is over the previously compacted pavement.

1.2.11 Make sure there are no obstacles on the road in the direction of the machine's advancement.

1.2.12 Handle the machine carefully on uneven roads.

1.2.13 Utilize os equipamentos de segurança fornecidos e aperte o cinto de segurança.

1.2.14 Keep the roller clean. Clean dirt and oil residue from the operating platform and from the ladder, and keep the safety warnings clean and visible.

1.2.15 Follow the following safety measures before refueling:

- Turn off the engine.

- Do not smoke.
- Keep the machine away from flames.
- Place the refueling nozzle at the tank entrance to avoid sparks.

1.2.16 Safety measures taken before maintenance and repair:

- Wedge the compactor cylinder and the rear wheels.
- Make sure that the locking mechanism of the front and rear chassis is locked.

1.2.17 If the roller is not equipped with a cabin, use ear protectors when the noise level exceeds 85 dB.

Do not make any modifications to the compactor, as this will compromise the safety of the machine. Any modification must be authorized in advance in writing by XCMG.

1.2.19 Start the machine according to the instructions in the operation manual. When operating the machine in cold temperatures, the braking distance will be greater than normal due to the low temperature of hydraulic system.

1.2.20 It is prohibited to tow the compactor without the assistance of professionals.

1.3 Safety procedures for operation

1.3.1 Preparation before operation

1.3.1.1 Familiarize yourself with the rules and precautions in workplace (figure 1-2).

1.3.1.2 Before starting the machine or when about to operate it machine for the first time, read carefully and understand the content of this manual.

1.3.1.3 Never operate or drive the compactor roller after ingesting alcoholic beverages, stimulants or others medications.

Figure 1-2

1.3.1.4 Know the location of the fire extinguisher and the first aid kit, and memorize the numbers of emergency (figure 1-3).

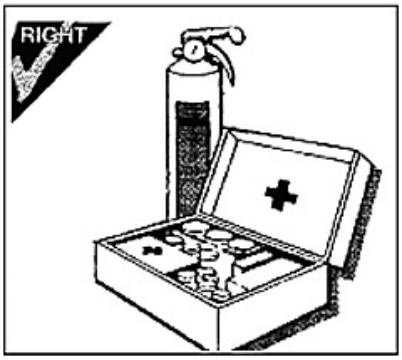


Figure 1-3

1.3.1.5 Use common sense to avoid accidents. In in case of an accident, do not panic and take action quick and effective. The most important thing is first of all guarantee the safety of life, and only then avoid harm to property.

1.3.1.6 For your own protection, always use personal protective equipment (figure 1-4).

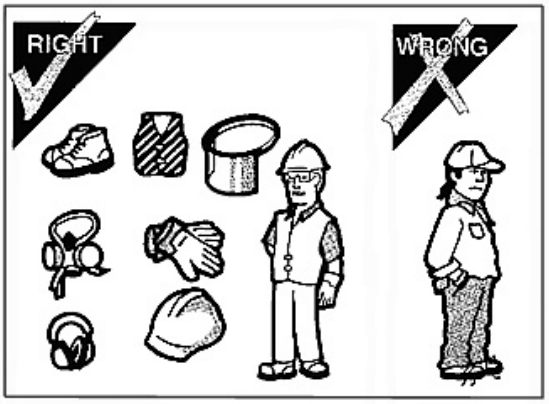


Figure 1-4

- Helmet
- Steel toe work boots
- Safety glasses
- Reflective clothing
- Work gloves
- Hearing protection
- Mask (in environments with dust presence)

1.3.2 Machine Verification

1.3.2.1 Check for any damage to the machine, such as loose, broken, or missing components. If find damages, do not use the machine before the necessary repairs are made (put up a notice of alert on the machine to prevent other people from operating it.

1.3.2.2 Clean the windshield and the rearview mirrors.

1.3.2.3 The machine's signs and decals must be clean, complete, and legible.

1.3.2.4 All control elements with hands, feet, steps, anti-slip devices, and handles They must be free of ice and contamination from oil and dirt.

1.3.2.5 Do not leave tools or other objects in the operator's workspace.

1.3.2.6 All fluids must be at the correct level. Refill them if necessary.

1.3.2.7 Consult the specifications when it is necessary to refill a fluid.

1.3.2.8 Do not smoke or place the machine near flames during the level check and refueling.
fluids.

1.3.2.9 If you encounter any problems or suspect any damage to the compactor, please contact us.
immediately with the equipment management team, the machine owner or the local manager to
that the necessary repair be done in a timely manner.

1.3.2.10 Do not plug in the machine in environments with the presence of gases, such as in underground work.
narrow and poorly ventilated places, as the engine emits harmful gases. Keep the area well ventilated in any situation.

1.3.2.11 If the material used for compaction causes dust generation, install equipment for
ventilation, vaporize water on the road or wear a protective mask.

1.3.3 Operator skill

1.3.3.1 The operator must receive professional training and if familiarize with the machine, including the equipment of controls, warnings and symbols (figure 1-5).

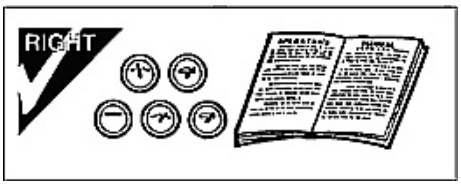


Figure 1-5

1.3.3.2 The operator must be aware of the capabilities and limitations of the compaction roller, such as the limit of speed, the lateral tilt limit, the limitations of braking and steering, etc.

1.3.3.3 The operator must know how to use the emergency braking and be aware of the position and procedures to avoid risks.

1.3.4 Personal safety

1.3.4.1 Check for any signs indicating that this machine cannot be operated or needs
repair.

1.3.4.2 Check that there is no technician performing repairs on the machine.

1.3.4.3 Turn on the machine only from the operator's station.

1.3.4.4 Fasten your seat belt well (if equipped).

1.3.4.5 Get on and off the roller only when the the machine is stopped, and always using the handrails correctly (figure 1-6). It is forbidden to transport passengers on roller compactor.

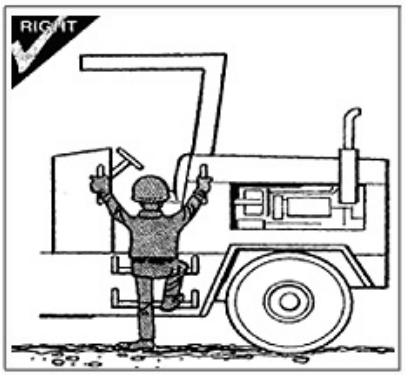


Figure 1-6

1.3.4.6 Do not adjust the seat while driving the roller. compactor, as it can move in directions unwanted. Make sure the seat is secure after your regulation. Do not leave the seat while operating the machine.

1.3.5 Desktop

1.3.5.1 Check the workspace around the machine and make sure there are no people or obstacles.

1.3.5.2 Check for cracks and depressions in the ground that they may damage the machine (figure 1-7).

Figure 1-7

1.3.5.3 Ensure that the vibration of the compactor does not cause damage to buildings and equipment located nearby. Remember that the roller passes a certain distance from the roadbed.

1.4 Security procedures for startup

1.4.1 Preparation before departure

1.4.1.1 Ensure that the emergency brake is functioning correctly.

1.4.1.2 Make sure that all control devices are functioning correctly.

1.4.1.3 Start the machine according to the instructions in the operating manual. When operating the machine In cold temperatures, the braking distance will be greater than normal due to the low temperature of the hydraulic system.

1.4.2 Operation after starting

1.4.2.1 Check if all instruments are operating normally.

1.4.2.2 Check if all control devices are operating normally.

1.4.2.3 If any problem is found, turn off the engine. Place a warning sign on the machine before get out of the machine.

1.4.3 Departure in cold climates

1.4.3.1 If it is necessary to use the cold start, follow the procedures described by the manufacturer.

1.4.3.2 If you start the game with a cable, carefully follow the correct procedures. Otherwise, there is the risk of serious injuries to people or damage to the machine, as well as battery explosion, acid leakage, etc.

1.4.3.3 Pay extra attention when connecting the cables to avoid the formation of sparks.

1.5 Safety procedures for driving

1.5.1 Points of attention:

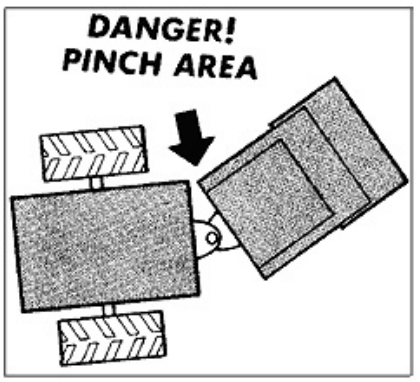


Figure 1-8

- Remember to press the stop button when leaving the station. the operator and the engine are turned on.
- Keep the cabin doors and windows closed while driving. the machine.
- Drive the roller carefully
- Watch the road carefully at all times, especially when reversing.
- Trust your vision, hearing, and smell to ensure the integrity of the compactor.
- Be aware of the potential risk when inhaling the exhaust gases from the compactor.
- Slow down in the curves, especially in tight turns.
- Entry of any person into the collision risk area is prohibited while the engine is on. operation (figure 1-8).

1.5.2 Driving on slopes

Avoid operating the machine transversely to the slopes. When possible, operate the machine going uphill and going down the slopes (Figures 1-9, 1-10). Do not change gear while on the slope and maintain a low speed. Do not use the operating mode (vibration work) when on very steep slopes pickles.

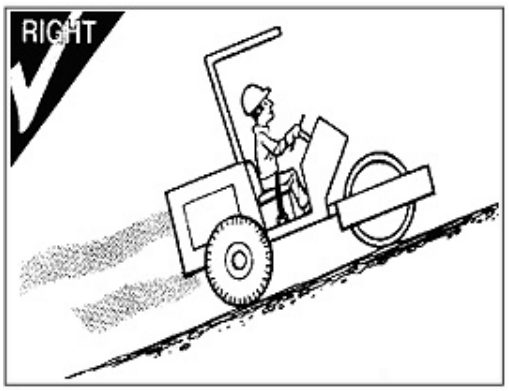


Figure 1-9

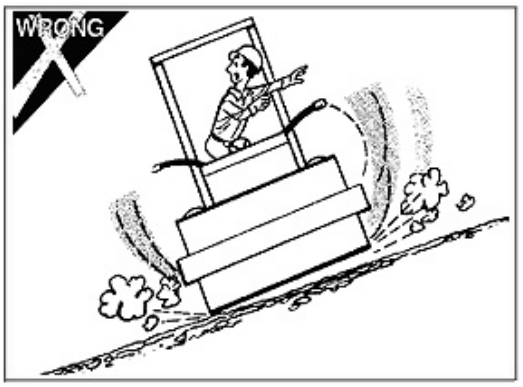


Figure 1-10

1.5.3 Driving on uneven terrain

- Avoid operating the machine on the bed of roads, ditches, and similar terrains, as wet pavements or Damaged parts reduce the load capacity of the compactor. Be careful of obstacles at height.
  from the machine, like suspended cables or branches (figure 1-11).

- Use the ROPS protection and fasten the seat belt tightly when driving the machine on rough terrain. irregulars.

- When approaching shoulders and depressions, make sure that 2/3 of the roller is over the previously compacted pavement.

Notice	**Never operate the machine on a slope that exceeds the specification. maximum for the machine. Always use low speed on ascents and descents.**

1.5.4 Driving on public roads

- Read the local traffic laws carefully.

- Always obey local traffic rules when driving the vehicle on public roads such as, for example, turn on the front headlights and direction lights and use the slow machine warning at the rear (mandatory in some countries). Do not exceed the speed limits of each road and maintain a safe distance for the braking (figure 1-12).

- Cross railway tracks calmly, without allowing the roller to touch both tracks.
  at the same time. Make sure that the roll does not come into contact with high voltage cables on the road.

Figure 1-11

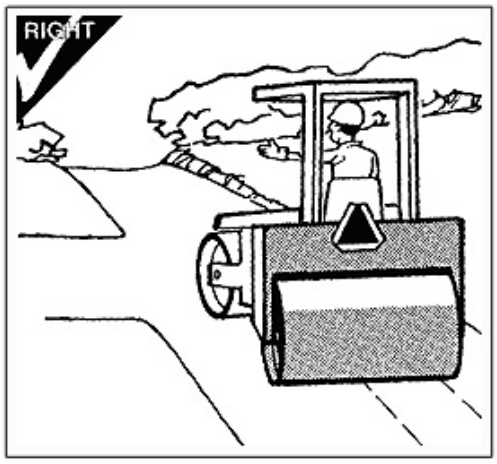


Figure 1-12

1.5.5 Engine stop

- Always turn off the engine according to the procedures described in the operating manual, and never do so do it with the machine in motion.
- Always remember to remove the key and never allow unauthorized people to turn on the machine.
- Get on or off the machine only when the compactor roller is stopped, using it correctly. railings and steps offered. Never jump from the machine.

1.6 Safety procedures for transportation

1.6.1 Personal safety

- Never stand below or near the roller compactor when loading it onto a transport machine, do not try to move or tow the machine using your hands.
- Take extra care, as there is a risk during the loading and unloading of the machine. accidents with serious or fatal injuries.

Notice	**Risk of accidents with serious or fatal injuries during the loading of the roller compactor!**

1.6.2 Transport machine

- The transport machine must meet the transportation specifications of the machine, such as maximum load, engine power, braking capacity, and other conditions. It is recommended to use a truck specific for the transportation of this type of machine.

- The best way to transport the roller in long distances is to load it on a truck.
  towing

- Use ramps for loading the compactor.
  always ensuring that the ramp is in great shape conditions. Use metal ramps whenever possible and never use deteriorated ramps (figure 1-13). Make sure that the ramp is well positioned between the machine of transport and the ground and that is not covered with oil, snow, ice or mud.

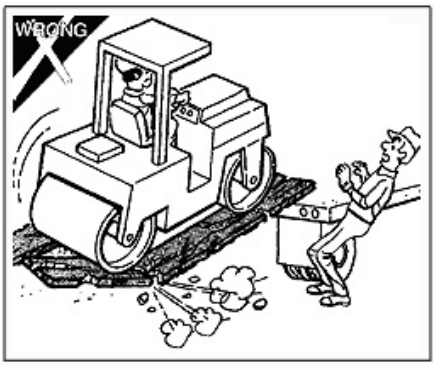


Figure 1-13

- Make sure the roller is in good condition.
  positioned on the transport machine, and connect the cable to the roller chain and on the winch mounted on the truck. Use it appropriate size current and steel cable and never use common strings.

- Start the tow truck operation towards the tow truck after releasing the emergency brake of the roll.
  compactor. Be sure to safely load the compactor roller onto the machine.
  transport according to the instructions in the operation manual. Check if all the components of the machine are fixed.

1.6.3 Loading the roller with a crane

A small crane can be used for loading the compactor roller, since all models of rollers have lifting holes. The weight of the machine can be found on the identification plate. Carry out the crane operation in compliance with the standards of security.

1.6.4 Tow

Notice	**It is prohibited to tow the road roller without the assistance of specialized technicians!**

- Do not tow the machine for distances over 300 meters. Always obey traffic rules and do not exceed the maximum speed limit during towing. The presence of any person is prohibited inside or on the roller compactor during towing (figure 1-14).

- Carefully read the chapters of the operations manual related to proper towing.

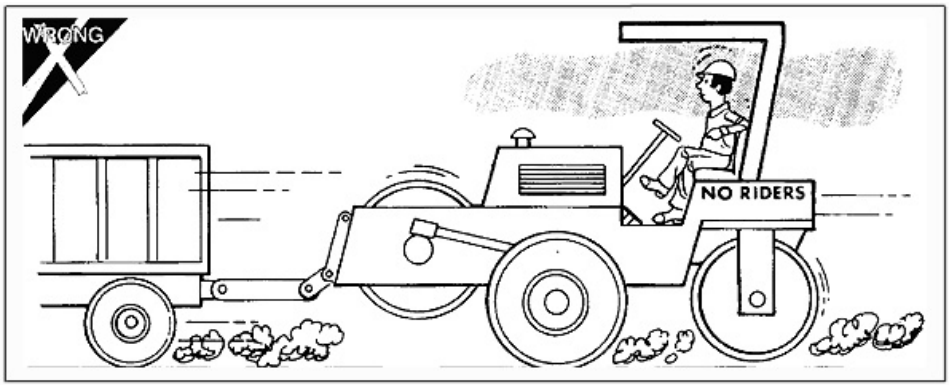


Figure 1-14

1.7 Safety procedures for fuel supply

Follow the following safety measures before refueling:

- Turn off the engine.
- Do not smoke.
- Keep the machine away from flames.
- Place the refueling nozzle in the tank opening to avoid sparks.
- Fill the fuel tank to the appropriate level with a fuel that meets the specifications.
- Clean the fuel residues from the machine before starting it.
- Check if the fuel tank cap is tightly secured to prevent leaks.

Notice	**Never refuel in an enclosed space.** **Keep the machine away from flames and other possible sources of risk during the supply.** **Connect the refueling nozzle of the tank to the ground to avoid the formation of sparks.** **It is forbidden to smoke and use a cellphone during refueling.**

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)LJXUH

- Check if the battery charge is off when using electric soldering. Do not use gasoline. (flammable) for cleaning. Handle and store flammable materials or components properly. that may be harmful to your body, always using a gas mask when using them.

- When it is necessary to lift the roller, use a counterweight to prevent it from falling or Inclination. Never rely solely on a hydraulic jack for lifting (figure 1-18).

- Do not make repairs on the compactor while it is in motion. Close the rear hood when the engine is running. linked. If you need to start the engine during the repair, make sure that the advance control lever be in the intermediate position and activate the emergency brake. If necessary, start the engine in places closed, connect an exhaust pipe with a dust collector to direct the residual gas outside.

 **Attention**	**Use only XCMG replacement parts.**

1.8.2 Engine Repair

 **Attention**	**Read the engine maintenance manual carefully.**

- Take extra care when the engine is running. Whenever possible, turn off the engine before repair.

- Do not wear loose clothing while performing repairs on the running engine.

- Pay attention to the potential risks mentioned in the engine maintenance manual.

- Wait for the engine to cool down before carrying out the repair.

1.8.3 Cooling system repair

 **Attention**	**Turn off the engine before the inspection.**

If possible, wait for the engine to cool down.

If the engine is still hot, be careful when opening the radiator cap.

Wear work gloves, work clothes, and safety glasses, and stay a certain distance from the lid. No remove the cap when the cooling system is still under pressure. Be careful when adding liquid of cooling in the hot liquid tank (Figure-19).

1.8.4 Hydraulic system repair

Attention	**Regular maintenance of the hydraulic system is very important.**

- The compactors operate under high oil pressure, so any minor damage to the hoses and couplings can cause serious accidents. Because it is made of rubber, the hose Hydraulics can suffer cracks after a certain period of use. Whenever you are not sure about its durability, replace the rubber hose with a new one provided by XCMG. Do not store the rubber hoses for a long time, as these are perishable products!

- {"text":"Attention. Note that the hydraulic system may still be under pressure even after shutdown."} machine. Make repairs only when there is no more pressure.

- Wear protective goggles and gloves when checking the hydraulic system. Use a piece of cardboard to check for leaks, never by hand (figure 1-20). If hydraulic oil penetrates the skin or enters the eyes, seek medical treatment immediately.

- Remove the fuel tank cap very carefully when refueling the hydraulic oil. Never smoke or keep the machine near flames. Clean any traces of oil.

- Make sure that the pressure shut-off valve is set correctly. The excess pressure will cause the rubber tube to crack and cause injuries. Low pressure will cause difficulty in control of the roller compactor.

1.8.5 Battery repair

There is the presence of corrosive sulfuric acid in the battery. Use gloves during the repair and avoid the acid. sulfúrico entre em contato com sua pele, sua roupa ou a máquina. Caso entre em contato com o ácido sulfuric, remove all contaminated clothing and wash the skin with running water for at least 15 minutes. If fall into the eyes, rinse with water for at least 15 minutes and then seek medical assistance, constantly cleaning the eyes with a sponge and a cloth on the way to the doctor.

Danger	**The gas inside the battery is explosive and can cause explosions if it gets close to flames.**

When replacing the battery, be careful to avoid a short circuit at the terminals. When removing the connection from the battery, first disconnect the negative terminal.

When using the charger to recharge the battery, disconnect it from the power source before connecting it to the battery cables.

1.8.6 Tire repair

- Carry out the tire replacement in a specific location for that purpose. Remember that the tires are inflated. of compressed air, and therefore special tools and equipment should be used in its replacement (figure 1-17).

- Check the proper tire pressure in the technical specifications. Note that exposure to the sun and the Friction can increase tire pressure.

- Do not open the tire valve using your hand (figure 1-18). Use a gas needle.
  to gradually reduce tire pressure.

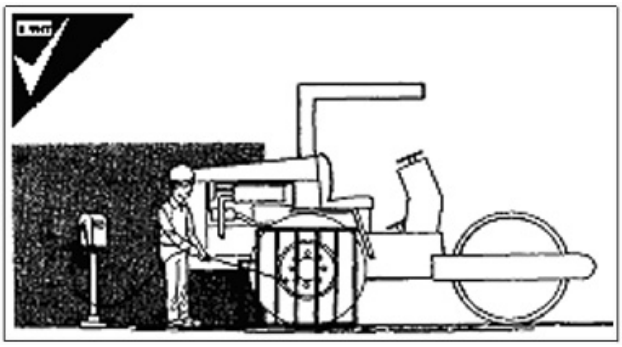


Figure 1-17

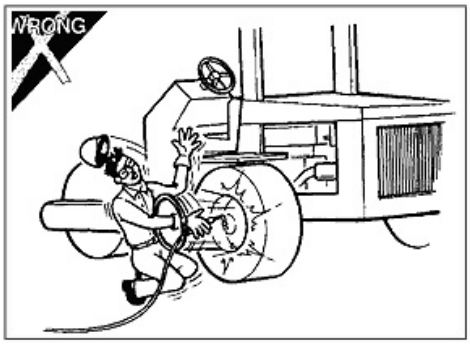


Figure 1-18

Notice	**Regularly check the wear of the tires.**

1.8.7 Operation of the ROPS cabin

- Check for damage or loose connections in the ROPS cabin. Regularly check and tighten the screws. and the couplings of the ROPS cabin using a wrench. Do not carry out welding operations or drill holes in the cabin. Never attempt to repair a damaged or deformed ROPS protection, always replace it with a new one.

- Check the conditions of the seatbelt and replace it if it is damaged or stretched.

1.8.8 Air conditioning system and pressure vessels

If the roller is equipped with an air conditioning system, do not perform welding nearby.
to the air conditioning or to its entry. The maintenance of the system, including the replacement of the fluid of Cooling must be done in a workshop equipped with special equipment (figure 1-19).

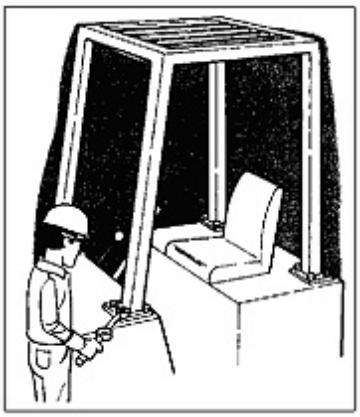


Figure 1-19

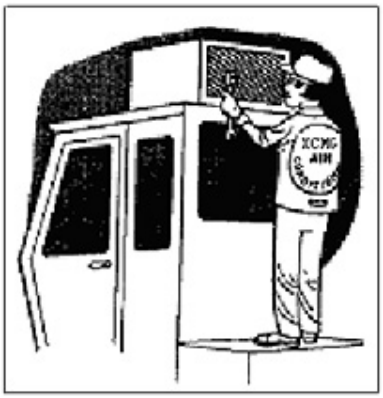


Figure 1-19

2. Operation Manual

2.1 General provisions

Only operators who have received professional training and hold the specific license.
we can operate the roller compactor.

2.1.2 The operator must always use personal protective equipment for their own protection when was operating the machine (Figure 1-4).

- Helmet
- Steel-toed work boots
- Protective glasses
- Reflective clothing
- Work gloves
- Ear protection
- Mask (in environments with dust presence)

2.1.3 Before starting the machine, or before operating it for the first time, read carefully and understand the content of this manual. This manual should be stored in an easily accessible location. If the if the manual is lost, damaged or becomes illegible, complete or replace it in a timely manner.

2.1.4 Safety is absolutely important! Read this manual in full, especially the symbols and security notices.

Description of safety symbols

	**This security alert symbol identifies important security information in this manual. Upon seeing this alert symbol, read carefully and follow the information presented, in addition to informing other operators.**

Description of the classification of safety symbols.

 **Danger**	**This symbol indicates a situation that, if not avoided, will result in injuries. serious or fatal.**
 **Notice**	**This symbol indicates a situation that, if not avoided, may result in injuries. serious or fatal.**

Attention	**This symbol indicates a situation that, if not avoided, will result in minor injuries. or moderate.**

2.2 Overview and illustration of the machine

2.2.1 Overview (Figure 2-1)

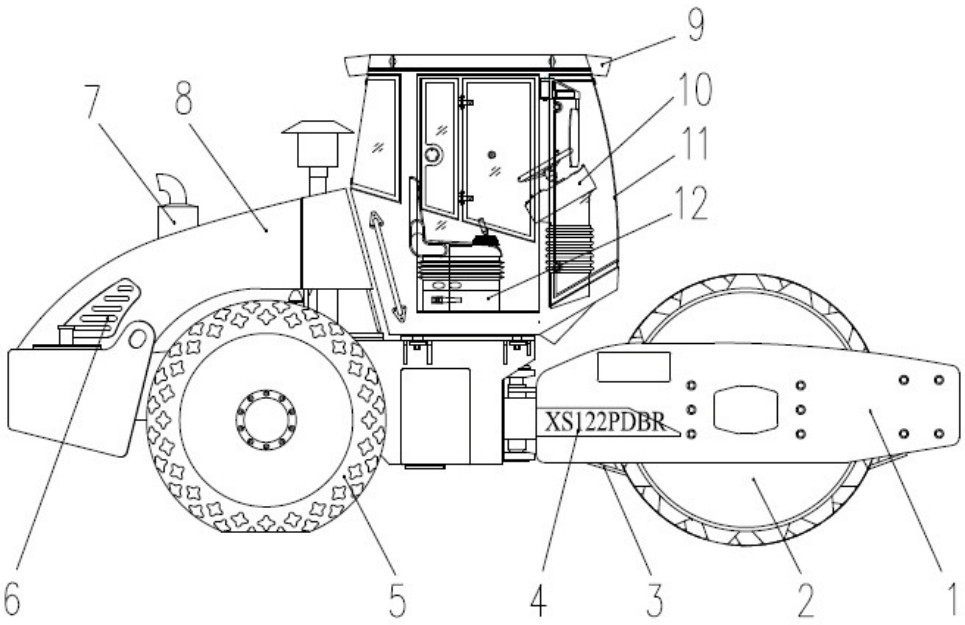


Figure 2-1

1 Chassis dianteiro e traseiro 2 Cilindro direito 3 Raspador 4 Marcação 5 Roda traseira
6. Sistema hidráulico 7 Sistema de tração 8 Capô traseiro 9 Sistema elétrico
10. Painel de instrumentos 11 Cabine do operador 12. Ar condicionado

Equipped with Cummins engine, water-cooled turbocharger, power reserve, consumption low fuel consumption, low noise, emission level meets Euro II standards.

The closed hydraulic drive system, which consists of an imported variable pump and motor. variável, garante o bom desempenho de condução e a alta capacidade de inclinação do rolo compactador. A variable continuous transmission with two steps ensures operation under different conditions work in order to ensure the proper speed.

The medium-sized drive axle with anti-slip differential allows for automatic torque distribution. according to the road conditions to ensure that the roller can operate with maximum traction and various working conditions.

The closed hydraulic vibration system, which consists of an imported variable pump and a variable motor, double band and double amplitude, linear static load configuration and scientific excitation force rationales to ensure the compaction of coatings made from different types of materials and different thicknesses.

The braking system consists of a drive axle, multi-disc wet brake in the cylinder reducer. compactor and closed hydraulic system in the hydrostatic braking system, with three functions (service, parking, emergency) to ensure the safety and reliability of driving.

The compactor cylinder is composed of a simple structure inside the roller chamber. vibratory, with high resistance and good rigidity, dual frequency and amplitude functions, static load high linear and excitation force, high efficiency, equipped with specialized vibration bearings with a long lifespan and high reliability.

Sound and visual alarms on the instrument panel provide maintenance and repair information to at all times, preventing the equipment from being operated with issues, preventing damage to equipment and reducing downtime.

According to ergonomic principles, several instruments, indicators, and operation buttons are concentrated on the tiltable steering box on the panel. The throttle lever and the advance/reverse lever they are positioned on the right side, where their operation is more comfortable.

ROPS cabin with good sealing, air conditioning, recorders, suspension seat, internal space wide and large windows with a good view, providing the driver with a safe operating environment comfortable.

2.2.2 Overview of the parts

2.2.2.1 Front and rear chassis

The front chassis (figure 2-2) not only connects the compaction cylinder, as it is also a part important for the compression. First, remove the connection screws of the front beam to separate the beam of the chassis, then remove the screws from the compactor cylinder. The compactor cylinder will be separated from the chassis and can be removed from the front.

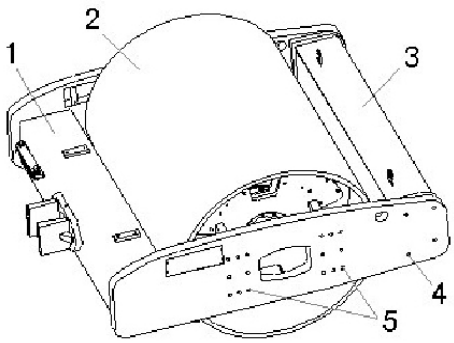


Figure 2-2

["1 Chassis of the roller","2 Vibratory roller"]

3 front beams
4 Front beam mounting bolts
5 assembly screws for the vibrating roller

In our left and right rear chassis (figure 2-3) the tank is welded, respectively hydraulic and the fuel tank. There is a plate of assembly of the shaft in central welding and plates upper and lower articulated in front welding, besides mounting plates for the diesel engine, the steering cylinder, the cabin, etc.

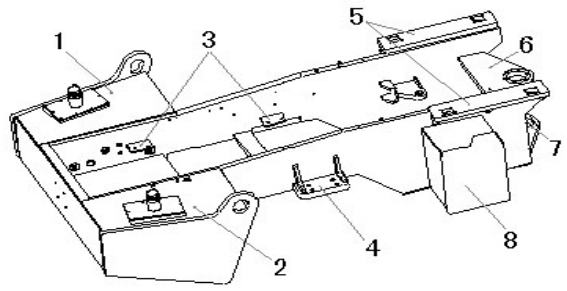


Figure 2-3

1 Tanque hidráulico 2 Tanque de combustível
3 Diesel engine mounting plate
4 Axis mounting plate
5 Cabin mounting plate
6 Upper articulated cap
7 Lower articulated plate
8 Battery box and hydraulic pump station

The front and rear chassis are connected by a joint mechanism (figure 2-4). The function this mechanism is the articulation of the direction and the oscillation The chassis. The articulated steering achieves a smaller radius. of turn

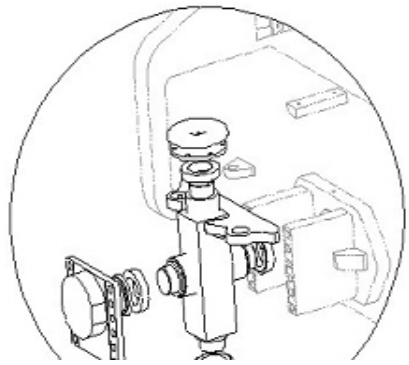


Figure 2-4

2.2.2.2 Compactor Cylinder

The compactor cylinder does not only serves to conduct the machine, but it is also the main one work equipment of the roller compactor.

The mounting brackets left and right are connected to front chassis. The other end the left mounting support is connected to the wheel reducer front. The compactor cylinder rolls through the driving plate and the left and right blocks of rubber damping.

The rigidity of the blocks of Left damping is different from the rigidity of the right blocks, therefore the blocks cannot be substituted for each other.

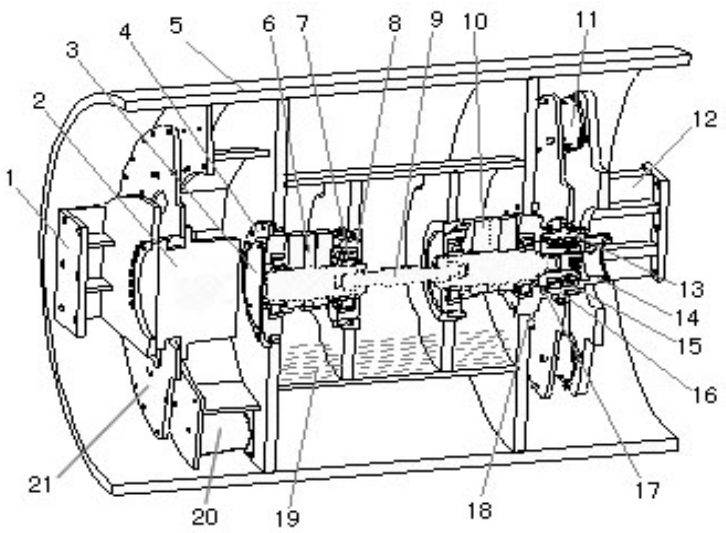


Figure 2-5

Left mounting support
2 Reducer of the compactor cylinder 3 Cover
4 Left bearing seat 5 Wheel welding
["6 Left Exciter","7 Special Vibration Bearing"]
["8 Internal axle bearing","9 Drive shaft"]
10 Right Exciter
11 Right rubber damping block
{"1":"12 Mounting Support Right","2":"13 O-Ring"}
14 Placa de acoplamento do motor 15 Rolamento do chassi
16 Sede do rolamento do chassi 17 Retentor de óleo 18 O-Ring
19 Vibration chamber (add oil for gears)
20 Left rubber damping block
21 driving license

The left and right exciters are supported on the bearing seat through of special vibration rolling. Add a certain amount of oil for gears in the vibration chamber. When the compactor cylinder rolls, the gear oil drips from top to bottom through the chamber wall vibration to lubricate the bearings.

The roller compactor can also have another configuration, with projections. round (figure 2-6), and can be called ram's foot roll. In this type of its surface is equipped with round bumps in a certain order, generally arranged in 10 lines, totaling 150 protrusions, or in three plates soldiers. These plates can be removed, allowing the roll to fulfill two functions.

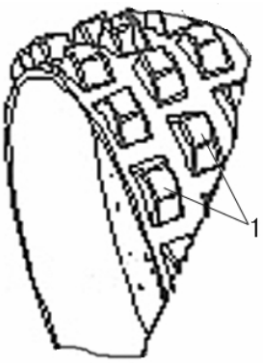


Figure 2-6

1 Salience

The sheep-foot roller optimizes compaction and mixing, and allows for obtaining broken and compacted clods.

2.2.2.3 Rear wheels

The rear wheels are powered by the tire and consist of the tire, wheel rim, drive shaft and other components (figure 2-7).

The adopted tires are low-pressure wide-base tires, with inflation pressure between 150 and 170 kPa. superfície com sulcos rasos recortados em formato de diamante e boas propriedades de amortecimento.

The rim used on the wheel is a standard rim. The wheel rim and the drive axle are connected by bolt and nut. The bolt is fixed to the drive shaft and cannot be removed, while the nut is a specific spherical bearing for the drive shaft.

The drive shaft is a medium-sized shaft with anti-slip properties.

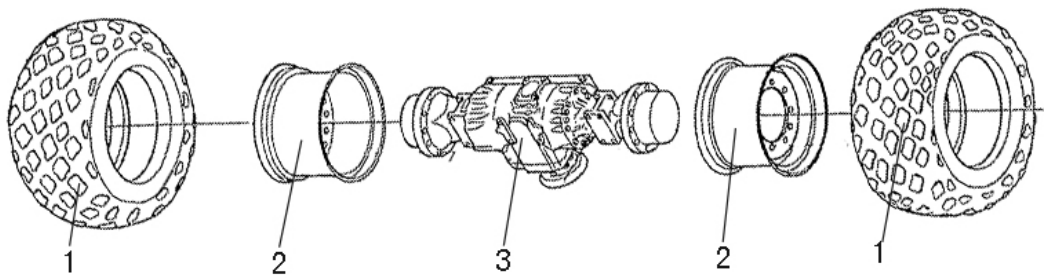


Figure 2-7

1 Pneu 2 Aro da roda 3 Eixo de acionamento

The dual activation of the compactor cylinder is the rear wheels, the drive shafts non-slip and low wide base tires pressure ensures good driving performance and high inclination capacity (theoretical capacity of up to 45%) of the compactor.

2.2.2.4 Traction system (figure 2-8)

The traction system is powered by a diesel engine. Cummins, which includes the following subsystems:

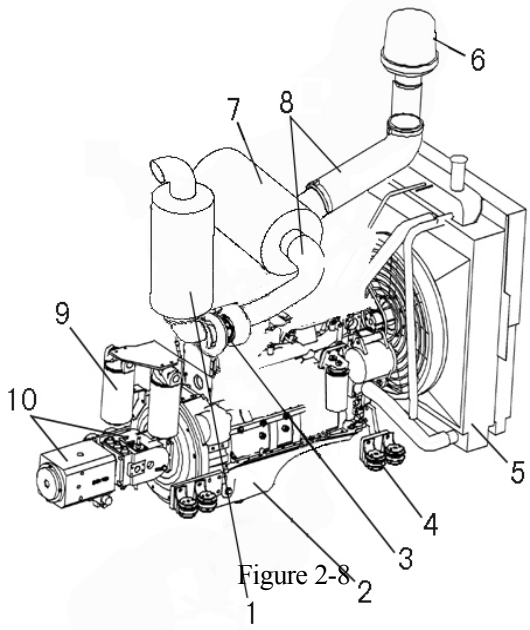


Figure 2-8

Figure 2-8

1 Silenciador 2 Motor Diesel
["3 Turbocharger","4 Shock absorber block"]
5 Radiador(de água e óleo hidráulico) 6 Pré-filtro
7 Filtro de ar 8 Tubo de entrada
9 Hydraulic oil filter
10 Hydraulic pump (driven pump, pump of vibration, power steering pump

- Suspension system

The damping blocks reduce vibration in the engine.

- Power take-off

The elastic element of the flange coupling transfers power from the engine flywheel to the pump. activated, the vibration pump and the steering pump.

- Admission system

The admission system has two filters and a pre-filter to filter large dust particles, and also prevent rain from entering the tube. The air filter purifies the air to ensure that the engine air is clean.

The power and the amount of air drawn in by the turbocharger are greater compared to a naturally aspirated motor. Since the rotation speed of the turbocharger is extremely high, its sensitivity to dust is also high, making the sealing of the inlet tube crucial.

- Fuel system

The fuel tank storage capacity is sufficient to operate the machine for a working day.

- Escape system

The sound attenuation value of the silencer exceeds 20 dB.

- Cooling system

The water radiator cools the engine block, while the hydraulic oil radiator cools the oil. hydraulic in the circuit. The fan is of the suction type.

- Electrical and starting systems

Electrical system voltage: 12V

2.2.2.5 Hydraulic system

Consult the hydraulic diagram on the following page (figure 2-9).

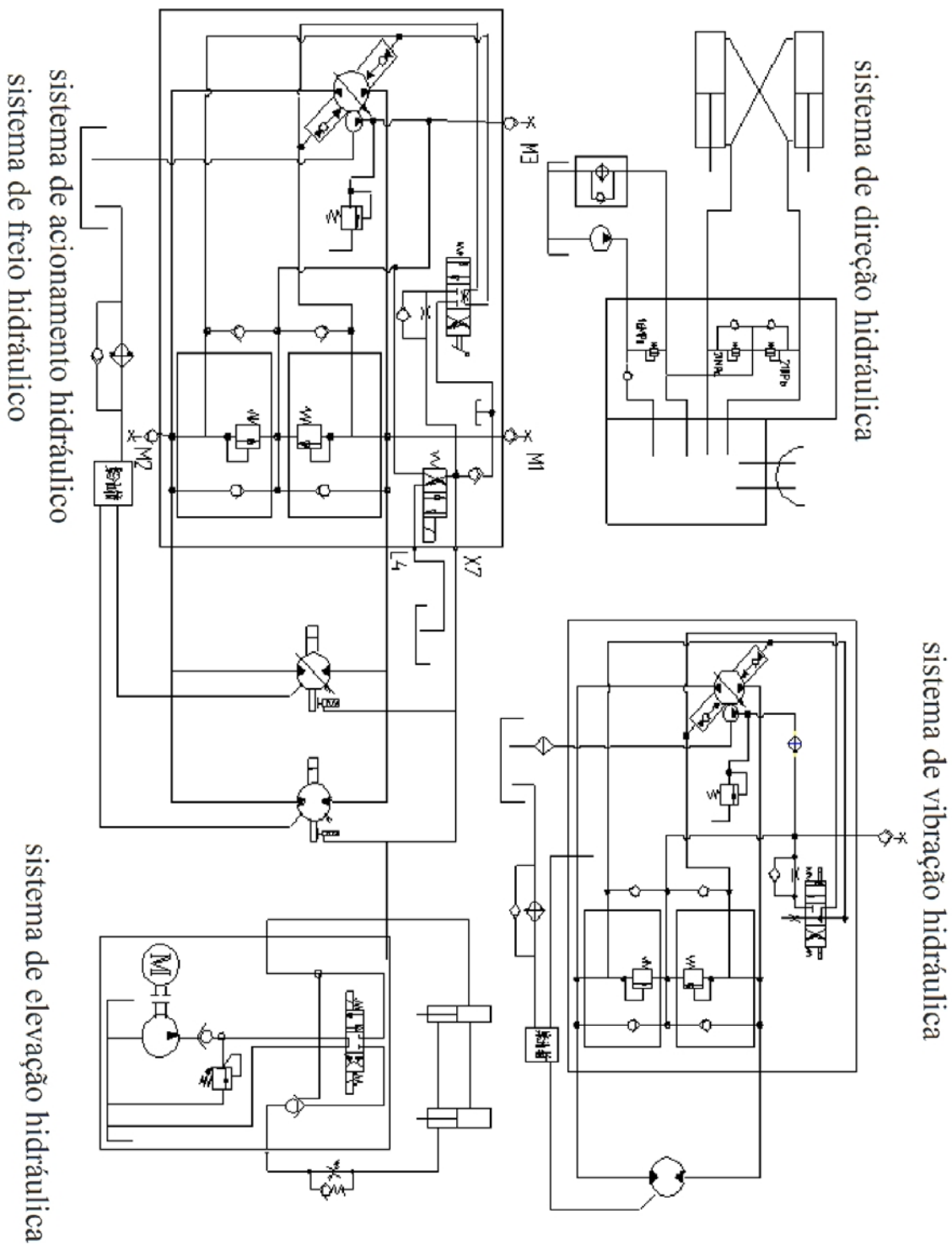

sistema de direção hidráulica
sistema de acionamento hidráulico
sistema de freio hidráulico
sistema de vibração hidráulica
sistema de elevação hidráulica
M3
M1
M2
X7
L7

Figure 2-9

- Hydraulic drive system

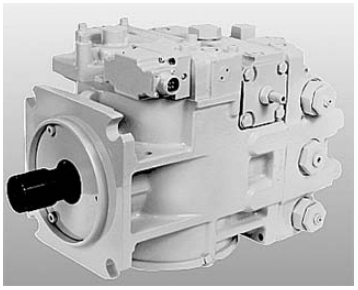


Figure 2-10

Axial Series 90 piston pumps from Sauer are used.
2-10), in which the oscillating plate was designed to obtain variable adjustments of displacement that goes from zero to the maximum. The built-in charging pump to compensate for internal leaks, it maintains a positive pressure in the main circuit, supplies cooling liquid, compensates for leaks in the system caused by external or auxiliary hydraulic valves and supplies oil under pressure for the control system.

Piston engines in the compactor cylinder and the rear wheels Figure 2-11. The initial position of the motor is equivalent to the position of maximum displacement for it to provide maximum starting torque capable of meeting the demands for high acceleration.

Figure 2-11

The closed hydraulic system consists of variable pump and motor. together with other system components for transmission and the hydraulic power control. The variable motor on the rear wheels has dual position control and operates at two speeds through permutations and combinations. The purpose of the displacement pump variable is the continuous forward/reverse speed acquisition, which adapts the machine to the demands of the different working conditions of the roller.

- Hydraulic vibration system

Figure 2-12

The hydraulic vibration system of a closed hydraulic system composed of pumps from the Sauer Series 90 Axial (figure 2-12) with a fixed displacement motor. The output direction of the variable pump Oil varies according to the oscillating plate to change the direction of the axis of motor, allowing a double frequency. The direction of forward/reverse of the The right and left exciters of the compactor cylinder are different. resulting in different vibration amplitudes of the cylinder, that is, double amplitude. The frequency and double amplitude adapt to the roll compactor, making it efficient for compressing different types of materials, coatings, and thicknesses.

- Hydraulic steering system

Open hydraulic system composed of gear pumps, hydraulic steering gear and steering cylinder. The operation of the steering is very light and flexible.

- Hydraulic lifting system

The hydraulic pump station of the hood lifting cylinder provides a control switch. in the instrument panel to control the raising and lowering of the hood. The operation is comfortable and reliable.

- Hydraulic brake system

The braking system is divided into service brake, parking brake, and emergency brake.

Braking occurs through the operation of the activated pump.

The drive shaft and the reducer of the compacting cylinder have a brake disc for the compression. from the spring and the relief of the oil pressure. When the compactor is stopped, since there is no oil under pressure, the brake disc remains closed and with that the compacting cylinder and the rear wheels cannot turn.

Pull the emergency brake lever in the cabin in case of an emergency, which will result in oil discharge under pressure, during the closing of the brake discs and in the immediate stop of the cylinder compressor and the rear wheels. At that moment, immediately position the lever in the position of driving.

Notice	**Use the brake lever only in case of emergency, otherwise the brakes will be damaged and will have their performance reduced.**

2.2.2.6 Operating system

The practical and aesthetic instrument panel is steering wheel assembly, of the gauges, of the indicator lights, of the switches and others components in the meter box.

The steering box is positioned on the side. seat right and is easy to operate.

Safe and comfortable seat with suspension and seatbelt.

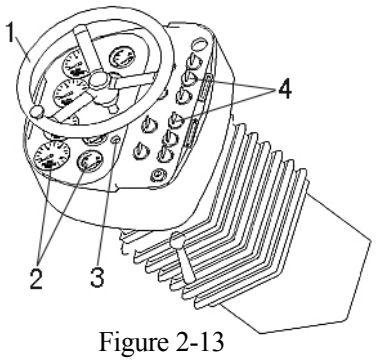


Figure 2-13

1Volante 2 Medidores 3 Luzes indicadoras
4 Switches

2.2.2.7 Cabin

Cabin equipped with rollover protection (ROPS) to ensure the operator's safety.

Equipped with large windows at all angles of view to facilitate visibility.

Spacious and comfortable interior.

Install shock spacers between the cabin and the suspended seat to reduce the impact of vibration for the operator, thus increasing comfort during driving.

Use the air conditioning and avoid the entry of dust into the cabin.

This cabin is also equipped with sound insulation, which reduces harmful noise.

2.2.2.8 Air conditioning system

Cooling and heating air conditioning system that circulates hot water in the engine.
The evaporator is installed at the bottom of the seat and the condenser is located in front of the oil radiator.
water. The V-belt connects the compressor and the fan.

2.2.2.9 Electric system

Consult the electrical diagrams on the following pages (figure 2-14).

The electrical system provides power to the entire machine, including the starting circuit, the circuit of feeding, the parking circuit, and the failure alarm systems and work status indication
of the main components. The sound alarms and indicator lights on the instrument panel provide
continuous maintenance and repair information, in addition to the working conditions of the engine. To avoid damage
To the equipment, avoid operating it when it shows any problem.

2.2.2.10 Protections

Includes the rear hood, the scraper, etc.

The rear hood consists of a thin sheet with lightweight, supported by the lifting cylinder.

There are two types of scrapers, smooth and sheep's foot.

2.2.3 Use and scope

This medium-sized hydraulic vibratory roller is automotive and single-cylinder, with high power.
of vibration, high efficiency and excellent compaction quality, recommended for compaction operations and filling in various materials (the sheep foot roller is effective for the compaction of material Clayey) of base layers and subgrade layers, it is an ideal compaction equipment for works of construction of railways, highways, airports, ports, dams, and industries.

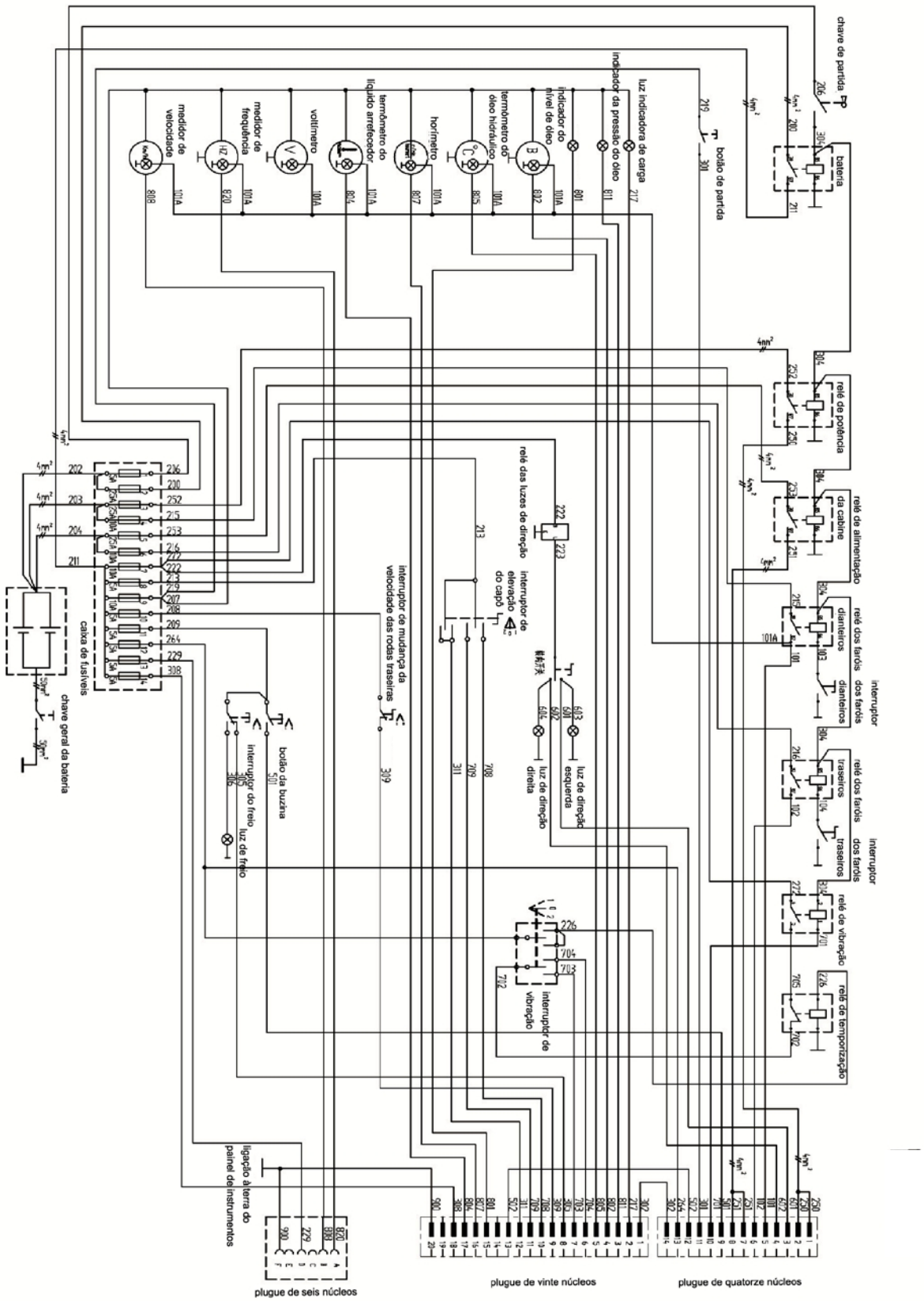

chave de partida
bateria
botão de partida
luz indicadora de carga
indicador da pressão do óleo
indicador do nível de óleo
termômetro do óleo hidráulico
horímetro
termômetro do líquido arrefecedor
voltímetro
medidor de frequência
medidor de velocidade
relé de potência
relé de alimentação da cabine
relé dos faróis dianteiros
interruptor dos faróis dianteiros
relé dos faróis traseiros
interruptor dos faróis traseiros
relé de vibração
relé de temporização
relé das luzes de direção
interruptor de elevação do capô
luz de direção esquerda
luz de direção direita
interruptor de mudança da velocidade das rodas traseiras
interruptor do freio
luz de freio
botão da buzina
interruptor de vibração
caixa de fusíveis
chave geral da bateria
ligação à terra do painel de instrumentos
plugue de seis núcleos
plugue de vinte núcleos
plugue de quatorze núcleos

Figure 2-14

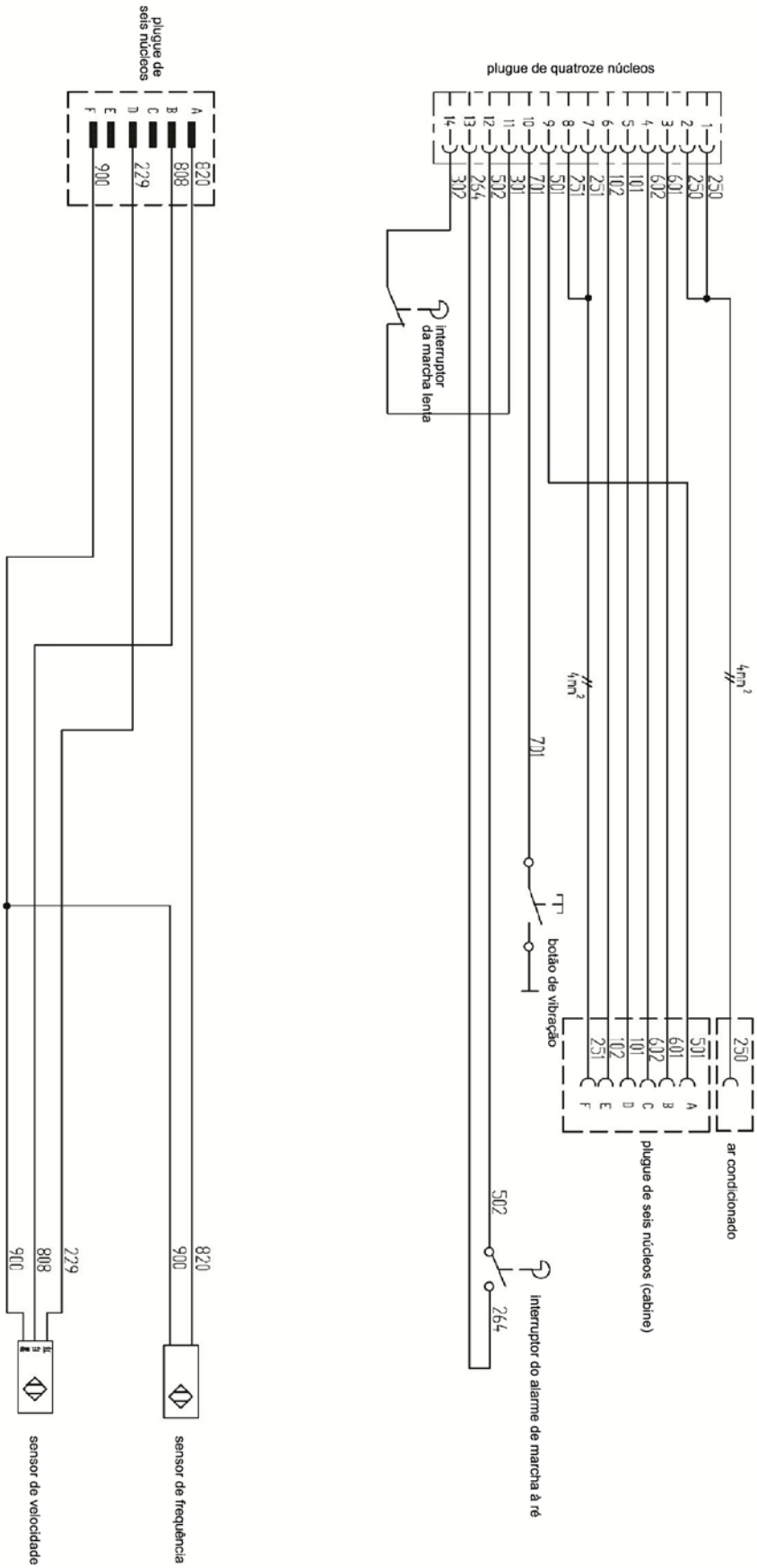

plugue de seis núcleos
A
B
C
D
E
F
820
808
229
900
sensor de velocidade
sensor de frequência
820
900
229
808
900
plugue de quatroze núcleos
1
2
3
4
5
6
7
8
9
10
11
12
13
14
250
250
601
602
101
102
251
251
501
701
301
502
264
302
interruptor da marcha lenta
4mm²
4mm²
701
botão de vibração
502
264
interruptor do alarme de marcha à ré
plugue de seis núcleos (cabine)
A
B
C
D
E
F
531
601
602
101
102
251
ar condicionado
250
C
4mm²

Figure 2-14

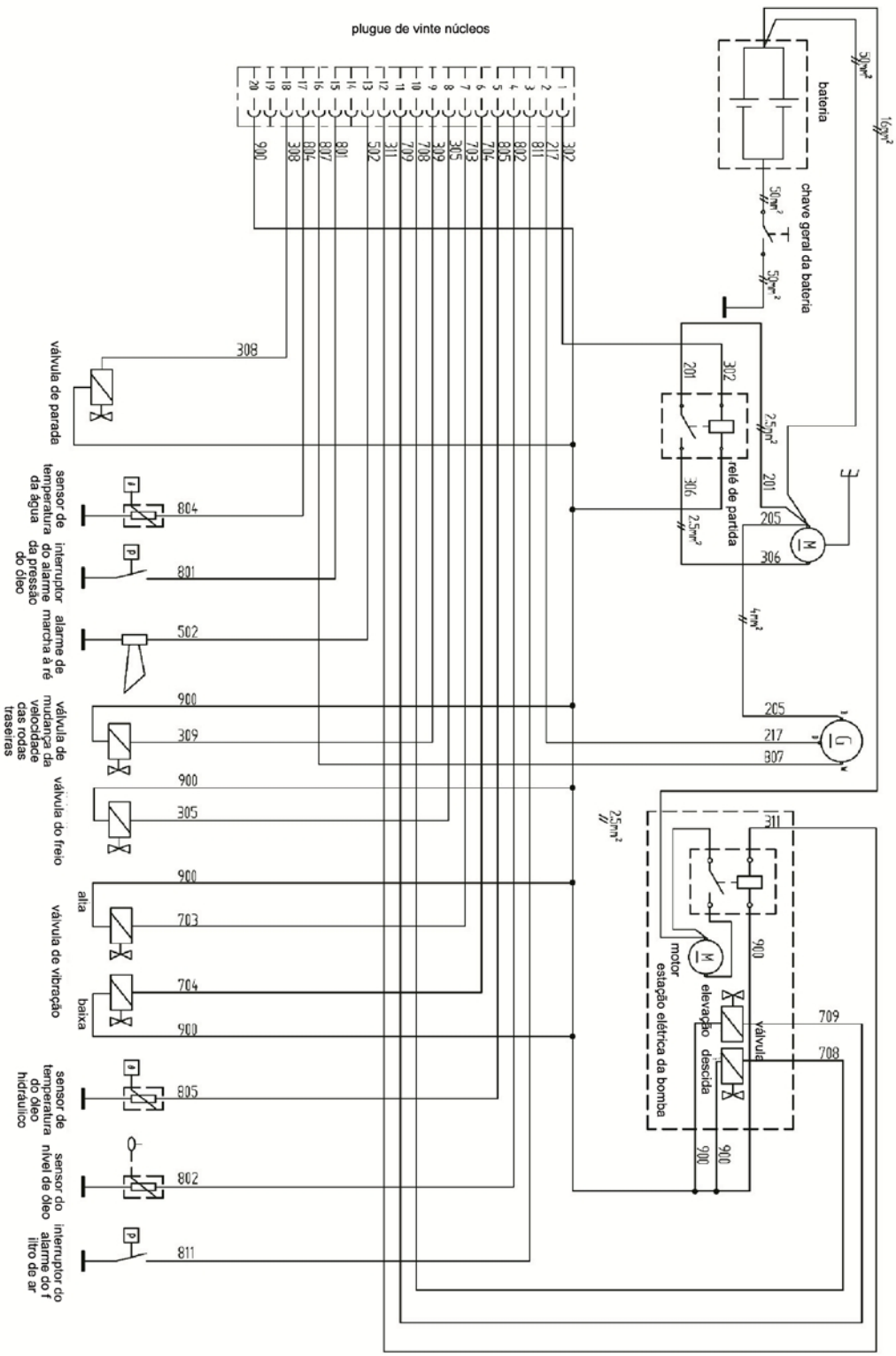

plugue de vinte núcleos
bateria
chave geral da bateria
relé de partida
estação elétrica da bomba
motor
válvula de parada
sensor de temperatura da água
interruptor do alarme da pressão do óleo
alarme de marcha à ré
válvula de mudança de velocidade das rodas traseiras
válvula do freio
válvula de vibração
alta
baixa
sensor de temperatura do óleo hidráulico
sensor do nível de óleo
interruptor do alarme do filtro de ar
elevação
descida
válvula

Figure 2-14

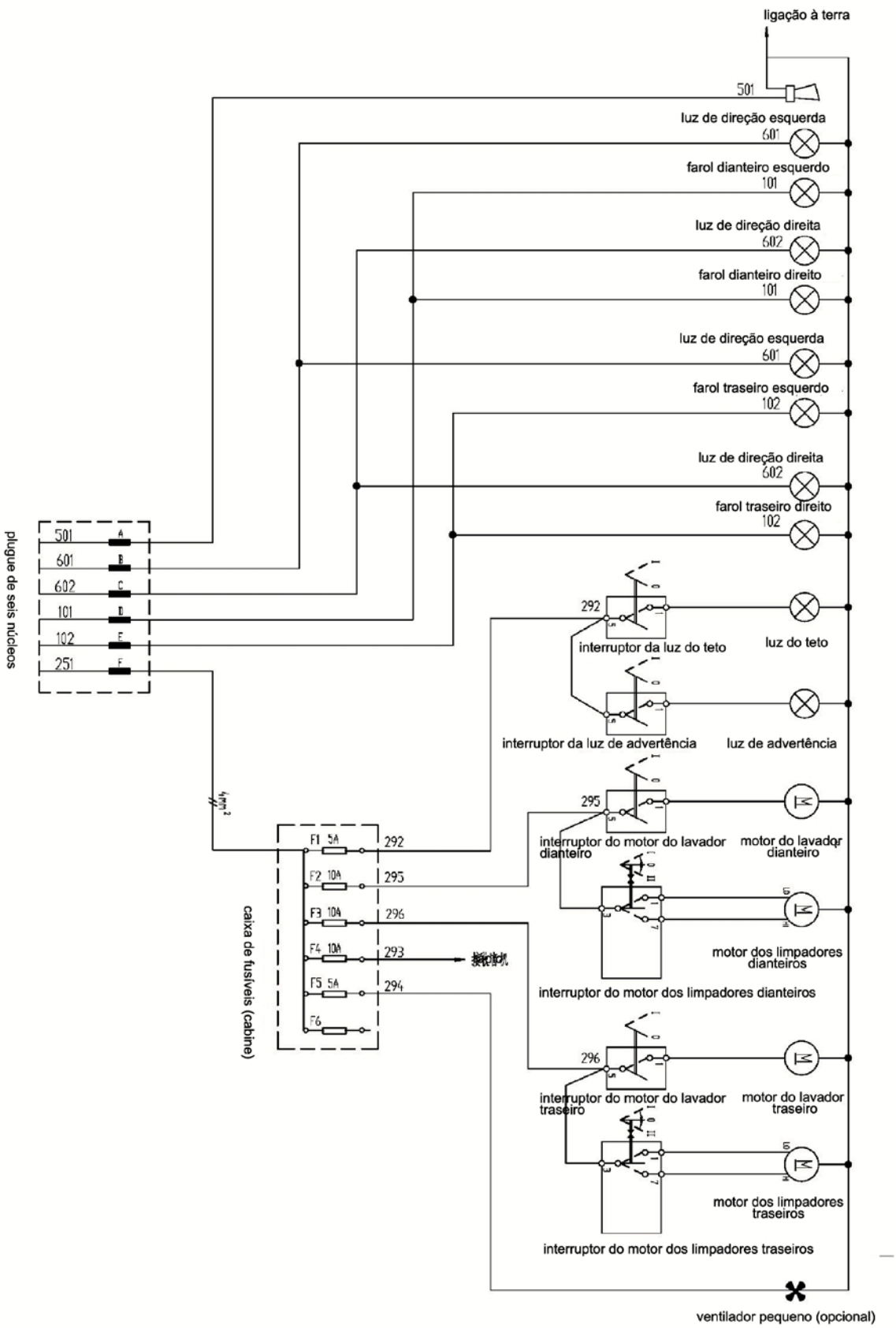

ligação à terra
501
luz de direção esquerda
601
farol dianteiro esquerdo
101
luz de direção direita
602
farol dianteiro direito
101
luz de direção esquerda
601
farol traseiro esquerdo
102
luz de direção direita
602
farol traseiro direito
102
plugue de seis núcleos
501 A
601 B
602 C
101 D
102 E
251 F
4mm²
caixa de fusíveis (cabine)
F1 5A
F2 10A
F3 10A
F4 10A
F5 5A
F6
292
295
296
293
294
292
interruptor da luz do teto
luz do teto
interruptor da luz de advertência
luz de advertência
295
interruptor do motor do lavador dianteiro
motor do lavador dianteiro
motor dos limpadores dianteiros
interruptor do motor dos limpadores dianteiros
296
interruptor do motor do lavador traseiro
motor do lavador traseiro
motor dos limpadores traseiros
interruptor do motor dos limpadores traseiros
ventilador pequeno (opcional)

Figure 2-14

2.2.4 Safety signs and auxiliary signs

2.2.4.1 Diagram of distribution of safety signals and auxiliary signals (figure 2-15)

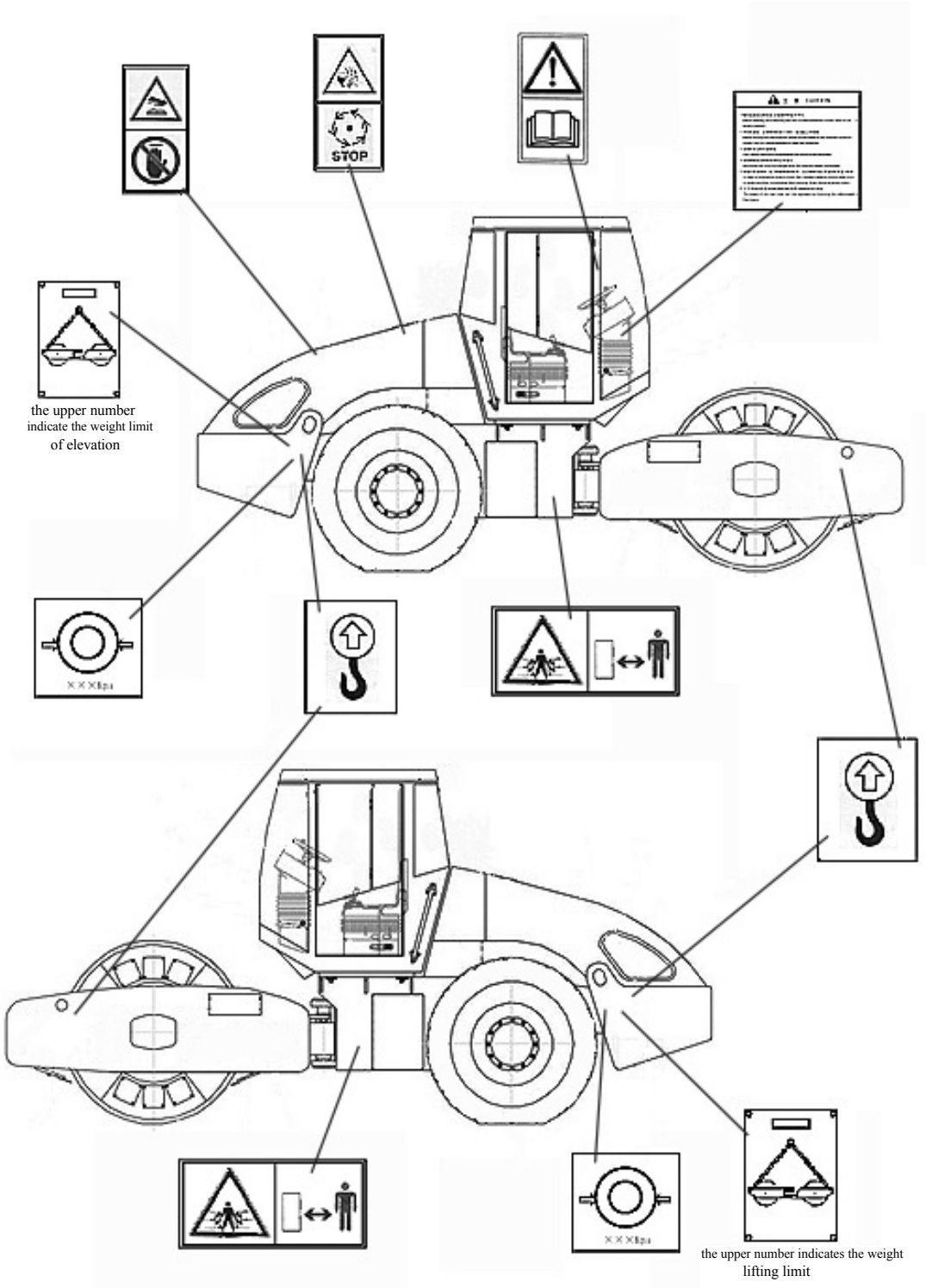
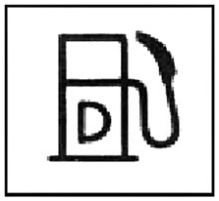
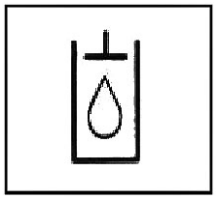
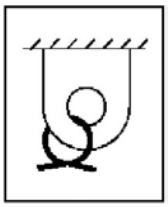
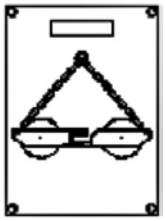
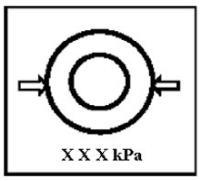
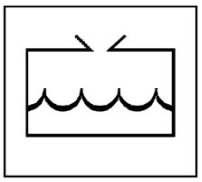
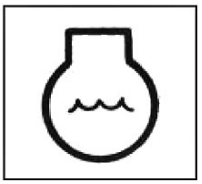
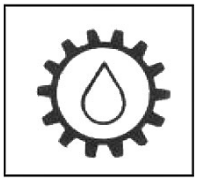
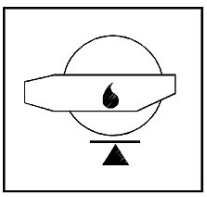


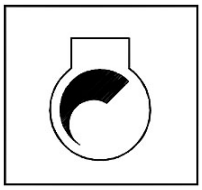
Figure 2-15

2.2.4.2 Description of safety signals and auxiliary signals (table 2-1)

Table 2-1

No.	Figure	Name	Description
1		Read the signs of the operator manual	Attention. The operator must read carefully the operating manual before driving or operate the machine.
2		Instructions of operation	Note. Emphasize the main precautions of operation of the compactor roller.
3		Risk area signal crushing of the collision	Safety signal! There is a risk of when the joint of the chassis front e back gira. Stay away!
4		Risk mark of burns	Safety signal! Avoid contact with exhaust pipes, tanks and other parts with elevated temperature.
5		Danger signal of fan rotation	Safety sign! Keep your hands and the arms away from the fan when the even if it is in operation.
6		Signal of the location of refueling of fuel	Indication of the location for addition of fuel.
7		Sign of the place refueling of the hydraulic oil	Indication of the location for oil addition hydraulic.

8		Local sign of elevation	Indication of the roll lift hole for the lifting of the entire machine.
9		Sign of the place of fixation	Indication of the roller fastening hole for the transport of the whole machine.
10		Sign of elevation	Machine lift signal. The number on The top indicates the weight limit.
11		Pressure signal of tire	Regularly check the tire pressure of according to the amount indicated in the deposit.
12		Reservoir signal of liquid of cooling	Indication of the reservoir position of coolant.
13		Signal of the liquid of cooling of the motor	Indication of the tank's exit location, add antifreeze according to as specifications.
14		Oil signal of engine	Indication of the location for adding oil motor
15		Oil signal of transmission	Indication of the location of oil addition cylinder compactor reducer and oil level check
16		Oil level indicator of the cylinder compactor	Location indication for oil addition vibration chamber of the compactor cylinder and the oil level check

17		Control signal of accelerator	Indication of the lever position of throttle control.
18		Warning signal for use ear protection	This symbol indicates that a protector auricular should to be used. (If configured

2.2.4.3 Maintenance of signals

- Keep the signs readable. If you need to clean them, use a clean cloth and soap to wipe them. use cleaning solvents or gasoline.
- The signs cannot be damaged or lost. If you lose them or if they are damaged or illegible, replace them in a timely manner.
- Safety signs are more important and should be checked daily.

2.3 Description and illustration of the icons of the direction elements

2.3.1 Illustration of the direction element icons

Instrument panel assembly (figure 2-16), steering box package (figure 2-17), and assembly of switches in the cabin (figure 2-18).

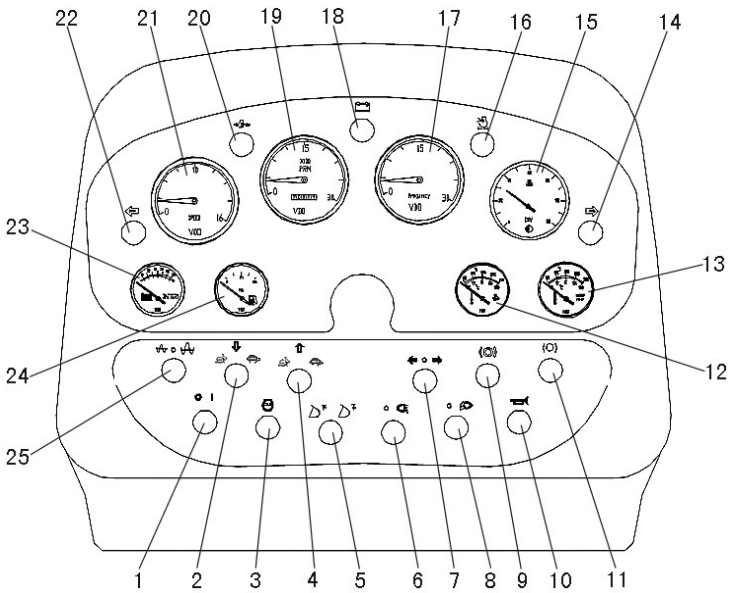


Figure 2-16

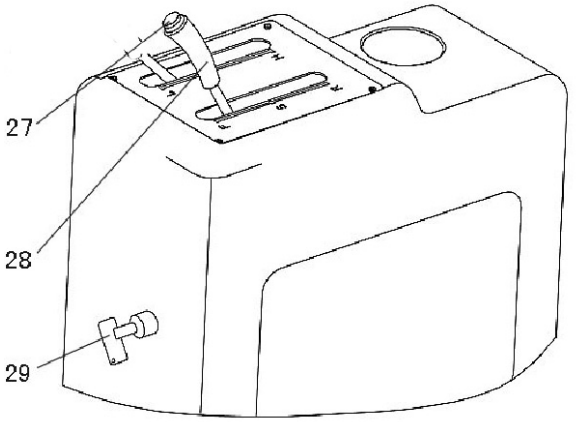


Figure 2-17

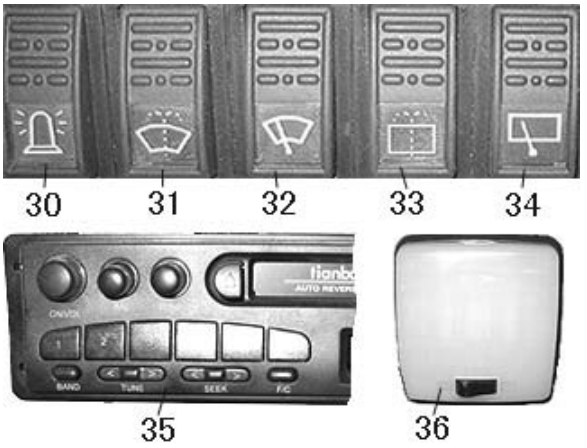
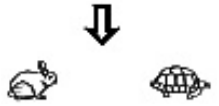


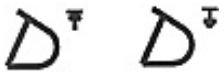
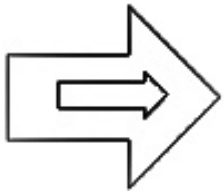
Figure 2-18

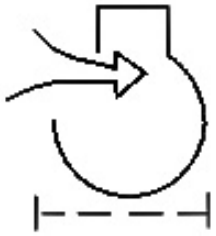
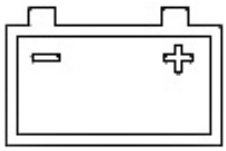
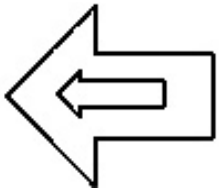
1	Starter key	2	Switch of the wheel speed back	3	Start button	4	Switch of speed of compactor cylinder	5	Switch of hood lift
6	Switch of taillights	7	Light switch of direction	8	Switch of front headlights	9	Brake lights	10	Horn button
Stop	button of emergency	12	Temperature meter of hydraulic oil	13	Meter of temperature of liquid of cooling	14	Right turn signal	15	Densimeter
16	Warning light of air filter	17	Frequency meter of the vibration	18	Indicator light of load	19	Hour meter with RPM	20	Warning light of the pressure
Speedometer		22	Left indicator light	23	Voltmeter battery	24	Indicator of the level of fuel	25	Selector button of amplitude
27	Vibration button	28	Driving lever	29	Main switch	30	Light switch of warning	31	Switch of front washer
32	Switch of the front cleaner	33	Washer switch rear	34	Switch of rear wiper	35	Radio	36	Lighting

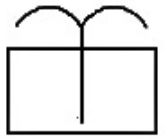
2.3.2 Description of the direction elements icons (figure 2-2)

Table 2-2

No.	Figure	Name	Description
1		Switch of departure	Insert the key and turn clockwise to give the game on the machine.
2		Switch of speed of the rear rear wheels lower	Two positions. The rabbit represents the high march of wheels, while the turtle represents the gear of the rear wheels.
3		Start button	After turning on the machine, start the engine.

4		Switch of speed of cylinder compactor	Two positions. The rabbit represents the high march of cylinder, while the turtle represents the march lowering of the cylinder.
5		Switch of elevation of hood	Three positions (automatic return). Hood up / down: left to go up and right to go down.
6		Switch of the taillights	Two positions. Controls the taillights.
7		Switch of Three left and right turn	positions. Controls the turn signals for the signals.
8		Switch of the front headlights	Two positions. It controls the front lights.
9		Brake lights	It lights up when the emergency brake is activated.
10		Horn button	After turning on the machine, press this button to sound the horn.
11		Stop button In case of emergency	emergency, press this button to perform the emergency stop of the roller compactor.
12		Measurer of temperature of hydraulic oil	It Indicates the temperature of the hydraulic oil. The normal range. is between 65ºC and 80ºC. Stop and check the machine. when the value exceeds 95ºC.
13		Meter of temperature of liquid of cooling	Indicate the temperature of the coolant liquid. normal range is between 82ºC and 93ºC. Stop and check the machine when the value exceeds 102ºC.
14		Turn signal right	Signals the operation of the right turn signal.

15		Densimeter	Show the density data.
16		Warning light of air filter	When the engine is operating at speed nominal, this light turns on to indicate that the air filter needs cleaning or replacement.
17		Measuring device frequency of the vibration	Indicate the vibration frequency. The calibration value It is 30/35 Hz, with a variation of ±1 Hz.
18		Indicator light of load	After turning on the machine, the charge indicator light turns on. After starting the engine, the generator charges the the battery and the light goes out.
19		Hour meter with RPM	Indicate the engine speed and the operating time accumulated. The engine idle speed is 700-1000 RPM and the nominal speed is 2200 RPM.
20		Warning light on at pressure	After turning on the machine, the pressure warning light comes on. turns on and off after a few seconds. With the engine slow speed, the minimum oil pressure is 69 kPa. If the pressure is below this value, the light of The warning will light up, indicating to stop the machine. immediately for verification.
21		Speedometer	Indicates the speed of the compactor. The range normal is between 0 and 10 km/h
22		Turn signal left	Signals the operation of the left turn signal.

23		Voltmeter of battery	Indicate the battery voltage. The normal value is 12V, with value variations of ±1V.
24		Indicator of level of combustível	Indicate the fuel level in the tank. Refill when it is below ¼ of capacity.
25		Selector button of amplitude	Three positions. Left for low amplitude, right for high amplitude and intermediate position to stop the vibration.
27		Button of vibration	Press this button to turn the vibration on/off.
28		Lever of conduct	The compactor for when the lever is positioned in the intermediate position. Push the lever forward for the roll to advance, how much the farther from the intermediate position, the faster the speed. Pull the lever so that the roller retracts, the further away from the intermediate position, the more fast to speed
29		Main key	Turn on / off the battery.
30		Switch of light of warning	Turn on/off the rotating light.
31		Switch of front washer	Control the application of water on the front glass.
32		Switch of cleaner front	Controls the operation of the front windshield wiper.
33		Switch of rear washer	Controls the application of water on the rear window.

34		Switch of cleaner rear	Controls the operation of the rear window wiper.
35		Radio	Audio equipment.
36		Lighting	Illuminates the interior of the cabin.

2.4 Operating Procedures

This section describes the starting, operation, the correct way to use before starting, and precautions safety after the stop and in dangerous places, as well as the measures to be taken into consideration for avoid and eliminate downtime when working under special conditions.

2.4.1 Preparation before departure

Make sure to do all the preparation before starting the engine.

2.4.1.1 Operator Preparation

Before operating the machine, the operator must:

- Have received training and have the proper license for the operation of the machine.
- Do not drink or take stimulants.
- Be familiar with the environment, the conditions, and the tools of work.
- Be familiar with the various rules and precautions in the workplace.
- Have read the operation manual carefully and mastered the procedures described in it.
- Be equipped with individual protective equipment.
- Know the location of the fire extinguisher and the first aid kit.
- Do not smoke.
- I have personally checked the machine.

2.4.1.2 Inspeção e preparação do local

- Check if the location is suitable for the roller compactor's work to avoid damaging the surface. road.
- Check if the covering material, thickness, hardness, and other requirements of the flooring are of according to the construction process.

- Check for people or obstacles in front and behind the machine to ensure safety.
  operation.

Notice	Keep the roller compacting machine away from any building while operating it. The impact of the force the vibration from high amplitude work is felt in buildings located up to 50 meters away from a distance. The impact of the vibration force of low amplitude work is felt in buildings located up to 30 meters away

2.4.1.3 Machine verification and preparation

- Check for damage to the various components.
- Check for loose fasteners.
- Check for oil leaks or spills or air leaks.
- Check if the tire pressure is normal.
- Check if the lamps, mirrors, and glass of the cabin are damaged or dirty.
- Check if all parts are properly lubricated (Refer to the lubricants used in this machine in table 3-1).
- Check the level of hydraulic oil, fuel and coolant liquid they are suitable.
- Check if the safety signs are present. integers and readable.
- Check if the stairs and handrails are they are safe and show traces of oil.
- Check if the locking mechanism of the the front and rear chassis is open.

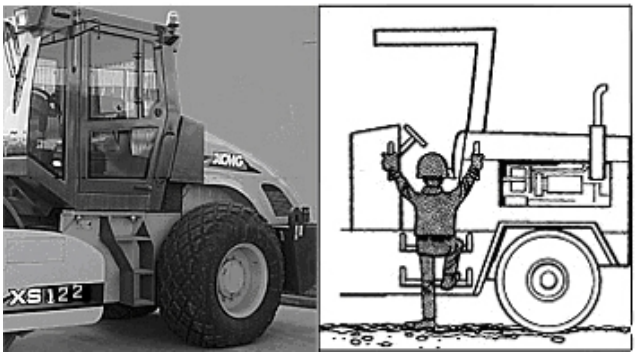


Figure 2-19

2.4.1.4 Inspection and preparation of the interior and the lower and upper parts of the cabin.

- To get in or out of the cabin, first open the door, then climb the steps while holding on.
  firmly hold the handrails with your hands.

Attention	**Get on and off the cabin correctly (Figure 2-19)**

- Adjust the seat position (figure 2-20) and the tilt of the panel of instruments (figure 2-21) to increase comfort of driving.

Adjust the seat position as follows:

(1) Forward and backward adjustment: operate the front adjustment handle and Slide backward and move the seat to the desired position.

(2) Weight adjustment: operate the weight adjustment handle to adapt the seat to the weight of the operator.

Adjustment of backrest: operate the backrest button to the angle desired.

Figure 2-20

1 adjustable front and rear cable
2 Adjustable weight cables
3 Cabo ajustável de encosto

Works the angle adjustment handle to position the panel of instruments at the right angle for steering wheel operation and the observation of the meters.

- Check the position of the rearview mirrors and if they provide good visibility.
- Check if all the instrumentation is easy to visualize.
- Turn on the main switch, insert the ignition key, and turn it clockwise time to turn on the machine.

Check the battery charge;

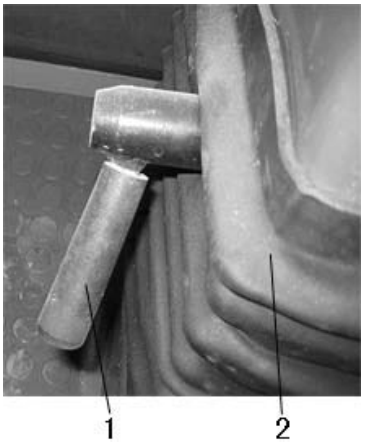


Figure 2-21

Angle adjustment knob
2. Instrument panel

Check the fuel level.

Check if the warning lights are working correctly.

Check if the switches in the cabin are working correctly.

2.4.2 Engine start

Start the engine only after completing all preparation procedures.

The gear lever must be in the neutral position; otherwise, the engine cannot be started.
the throttle control lever must be in the low gear position and the amplitude selector button it must be in the neutral position.

(2) Turn on the main switch, insert the ignition key and turn it clockwise to start the machine.

Press the start button to start the engine.

Do not try to start for more than 30 seconds. If the engine does not start immediately, wait two minutes until the next attempt.

Run the engine at idle (700-1000 RPM) for about 3 to 5 minutes. If the ambient temperature if it is low, extend the slow operation period.

If the ambient temperature is between -10ºC and -30ºC, use antifreeze. (see table 2-3).

Table 2-3

Antifreeze	ANTIFREEZE LUBRAX -37.5°
Motor oil	Lubrax Top Turbo 15W40
Diesel Fuel	S500 (COMMON DIESEL)

Refer to the specific methods and precautions for starting the engine in the "Operation Manual". Engine Maintenance

2.4.3 Operation of the roller compactor

Make sure the emergency stop button is in the initial position.

Push the throttle control lever forward and let the engine operate at nominal speed. at 2,200 RPM.

Turn the steering wheel left and right to check if it is working correctly.

Danger	**The presence of any person in the joint rotation area is prohibited. sides of the collision area.**

Operate the speed control switches for the rear wheels and the compactor cylinder. The roller compactor has two gears.

The 1st gear is used for the operation of the compactor, while the 2nd gear is used for the machine relocation between different locations.

Table 2-4

Speed switch of wheel displacement rear		
Speed range (km/h)	1st gear – 0~4.8	2nd gear - 0~10.4

(4) Push the lever forward for the roller to advance, the more far from the intermediate position, the speed is faster. Pull the lever for the roll to retract, the further away from the intermediate position, the more fast to speed. When reversing the roller, the reverse alarm is soado (figure 2-22).

Figure 2-22

Notice	**Carefully observe if there are people or obstacles behind the machine when backing it up, and always use low speed.** **When making a turn, ensure that the location is within the minimum radius of turn (6.8 m), and always use low speed.**

Driving on ramps (Figure 2-23)

The theoretical climb capacity of this series of compactors is 45% (α≈24°), however the ramps workplaces generally have a slope of 20% (α≈11.3°). Therefore, the correct operation of the A machine on ramps will always be safe for the operator.

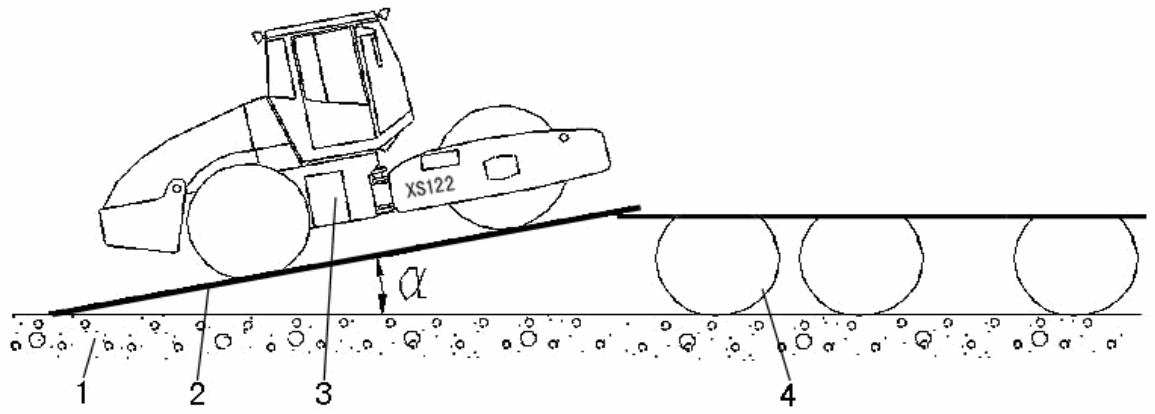


Figure 2-23

Danger	**When going up or down a ramp, always drive the machine in the forward direction. Never go up or down a ramp diagonally (figure 2-23).** **Drive the machine at low speed when going up and down a ramp. Never change. of march or make turns!**

2.4.4 Operation of the compactor roller

According to the construction process, the work of the compactor generally consists of vibratory compaction in back and forth.

Move the amplitude selector button to the left if you want low amplitude and to the right if you want high amplitude. high amplitude.

Press the vibration button to make the roller vibrate and press it again to stop the vibration.

According to the requirements of the construction process, it will be necessary to use high-frequency vibration or low amplitude. Stop the operation when the density of the compacted soil is as desired.

Notice	**Never turn on the vibration when the compactor is stopped, as this will cause damage to the machine (the bearings of the compactor cylinder do not receive lubrication) special for the vibration, as described in section 2.2.2.2.** **If it is necessary to change the range for an operation, first interrupt the vibration, otherwise the machine may be damaged.** **Never turn on the vibration on rigid pavements, otherwise the machine may to be damaged.**

Consult the procedures and usage precautions for the air conditioning in the 'Operation and Maintenance Manual.' of the Air Conditioning.

2.4.5 Roller compactor brakes

This series of compactors uses a hydraulic braking system, divided into service brake, parking brake and emergency brake. For more information, consult section 2.2.2.5.

Service brake

Return the driving lever to the neutral position. With this, there will be no more hydraulic oil leakage. pump, causing the speed of the compactor to decrease until it stops.

Parking brake

After stopping the compactor, pull the throttle control lever back and let the engine run. in slow motion. After about 3 to 5 minutes, turn the ignition key counterclockwise and turn it off the machine and the engine. Next, turn off the main battery switch and press the emergency stop button.

Emergency brake

In case of emergency, press the emergency stop button (the brake light will turn on) to activate. the emergency brake of the roller compactor. After braking, return the control lever to the position neutral in a timely manner.

 **Notice**	**Be careful with the emergency brake! Frequent use of the brake disc emergency (transmission axis and reducer of the compactor cylinder) can cause excessive wear, resulting in the loss of braking performance of the roller compactor**

2.4.6 Parking of the roller compactor

(1) After finishing the work with the compactor, park it on level ground using the brake. of parking. If it is necessary to park it on a slope, place chocks under the wheels and on compactor cylinder to prevent the descent of the machine.

(2) After lowering the hood.

After the operation, turn on the machine and rotate the hood lift switch to raise/lower the hood. The The hood lift switch has three positions with an automatic return function.

 **Notice**	**When the hood is to remain open, use a safety device to support him and prevent possible injuries due to his accidental fall.**

Upon exiting the compactor, the operator must remove the ignition key and close the doors and windows of the cabin to prevent the operation of the machine by unauthorized persons.

3. Maintenance and Repair

3.1 General provisions

3.1.1 The maintenance of the roller compactor must be carried out strictly in accordance with the instructions herein.
manual to ensure your prolonged lifespan and normal operation.

3.1.2 Only qualified and trained professionals who have passed evaluation can perform services.
of maintenance and repair on the compactor roller.

3.1.3 For your safety, always use personal protective equipment when performing services.
maintenance and repair of the machine (see figure 1-4).

3.1.4 Before any maintenance or repair work on the machine, read carefully and understand the content of this manual. This manual should be stored in an easily accessible location. If the manual is lost, damaged or made illegible, complete it or replace it in a timely manner.

3.1.5 Safety is absolutely important! Read this manual completely, especially the symbols and safety notices.

Description of safety symbols

	**This safety alert symbol identifies important safety information in this manual. When you see this warning symbol, read carefully and follow the information provided, in addition to informing them to other operators.**

Description of the classification of safety symbols.

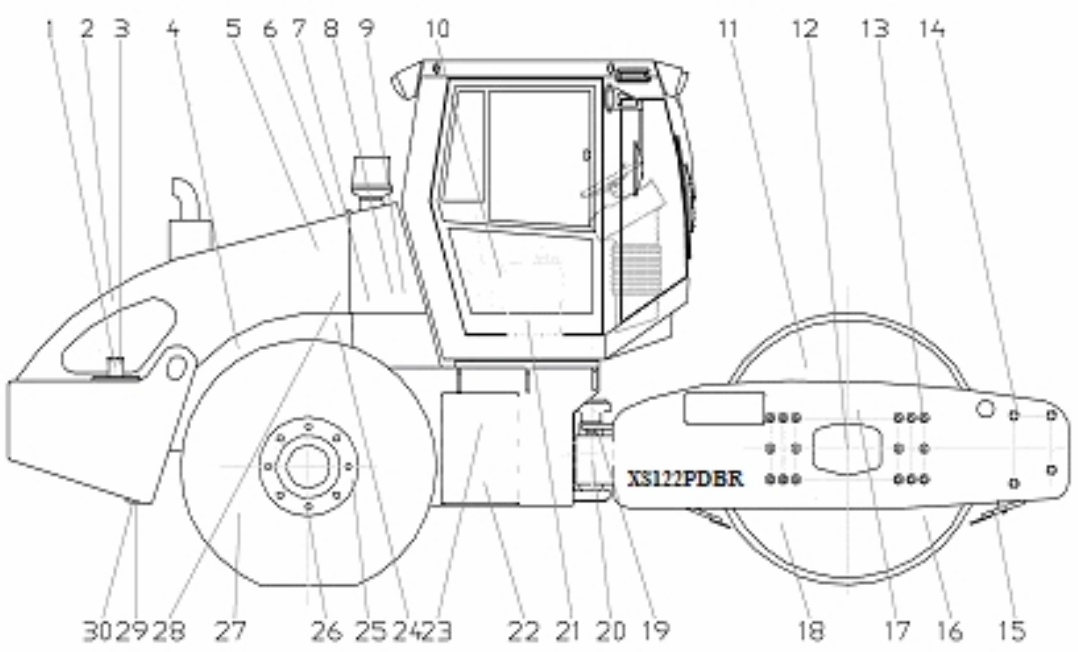
 **Danger**	**This symbol indicates a situation that, if not avoided, will result in injuries. serious or fatal.**
 **Notice**	**This symbol indicates a situation that, if not avoided, could result in injuries. serious or fatal.**
 **Attention**	**This symbol indicates a situation that, if not avoided, will result in minor injuries. or moderate.**

3.1.6 Protect the environment! Avoid oil spills.

3.1.7 Record all maintenance performed and keep it for future reference.

3.2 Illustration of maintenance parts

3.2.1 Distribution of parts that require maintenance (figure 3-1)



Distribution of parts that require maintenance (figure 3-1)

1	Fuel supply nozzle (right) 16 Oil level gauge of the compactor cylinder		
2	Rear hood	17	Breather valve of the compactor cylinder
3	Hydraulic oil supply nozzle (left)	18	rubber damping blocks rights and left side of the compactor cylinder
4	Engine oil level	19	Steering cylinder
5	Air filter	20	Articulation mechanism
6	Rear hood hinge	21	Air conditioning
7	Coolant reservoir	22	Battery
8	Hydraulic oil radiator	23	Hydraulic pump unit
9	Air conditioning condenser	24	Air conditioning compressor
10	Seat	25	Transmission Axis
11	Supply (drainage) oil tank of compactor cylinder	26	spherical nuts of the rim
12	Left reducer of the compactor cylinder	27	Valve
13	Cylinder mounting screws compactor	28	Rear hood lift cylinder
14	screws for mounting the front beam	29	Hydraulic oil drain plug (left)
15	Scraper	30	Hydraulic oil drain plugs (right)

3.2.2 Fluids used in the machine (table 3-1)

The types of lubricating oil, hydraulic oil, and cooling liquid used in the machine are listed.
in the table below. It is recommended to use fluids with the same or higher specifications. If it is
it is necessary to use another type, see section 3.5.

Table 3-1

Name	Specification	Application
lubricating oil	LUBRAX GL 5 80W90	vibration chamber, reducer and drive shaft of compactor cylinder
grease	LUBRAX LITH EP 2	lubrication cup of the joint mechanism, bearing seat and grooves of the vibration chamber of the compactor cylinder
engine oil	Lubrax Top Turbo 15W40	motor
hydraulic oil	anti-wear hydraulic oil exclusive from XCMG	LUBRAX HYDRA XP 68
fuel	0#	Lubrax Top Turbo 15W40
liquid of cooling	LUBRAX FLUID FOR RADIATORS -37.5°	radiator

3.3 Maintenance intervals

3.3.1 Daily maintenance (10 hours of work)

Table 3-2

parts	maintenance service
1	2.4.1.1 add fuel
3	2.4.1.2 check the hydraulic oil level
4	2.4.1.3 check the engine oil level
7	2.4.1.4 check the coolant reservoir level
15	2.4.1.5 adjust the scraper spacing
17	2.4.1.6 check the breather plug
13□14□18□26	2.4.1.7 check and tighten the screws and nuts
5	2.4.1.8 clean the air filter

3.3.2 Weekly Maintenance (50 hours of work)

Table 3-3

parts	maintenance service
5	2.4.2.1 check and clean the air filter
20	2.4.2.2 lubricate the parts of the joint mechanism
19	2.4.2.3 lubricate the steering cylinder parts
27	2.4.2.4 check the tire pressure

3.3.3 Monthly maintenance (200 hours of work)

Table 3-4

parts	maintenance service
11, 16	2.4.3.1 check the oil level of the compactor cylinder
12	2.4.3.2 check the oil level of the compacting cylinder reducer
18	2.4.3.3 check the shock absorbing blocks of the compactor cylinder
25	2.4.3.4 check the oil level of the drive shaft
["7","8","9"]	2.4.3.5 verify and clean the radiator
5	2.4.3.6 check the intake manifold
21	2.4.3.7 air conditioning maintenance

3.3.4 Quarterly maintenance (500 hours of work)

Table 3-5

parts	maintenance service
-	2.4.4.replace the fuel filter
-	2.4.4.2 replace the engine oil filter
-	2.4.4.3 replace the hydraulic oil filter
6, 28	2.4.4.4 lubricate the hinges and other parts of the hood
25	2.4.4.5 replace the lubricating oil of the drive shaft
22	2.4.4.6 battery maintenance

3.3.5 Semiannual maintenance (1,000 hours of work)

Table 3-6

parts	maintenance service
3, 29	2.4.5.1 clean condensation and sediments in the hydraulic oil tank
1, 30	2.4.5.2 clean condensation and sediments in the fuel tank
23	2.4.5.3 replace the hydraulic pump unit
-	2.4.5.4 check the engine valve clearance
-	2.4.5.5 verify the tension of the engine's drive belt

3.3.6 Annual maintenance (2,000 hours of work)

Table 3-7

pieces	maintenance service
3, 29	2.4.6.1 replace the hydraulic oil
11, 16	2.4.6.2 replace the lubricating oil of the compactor cylinder
12	2.4.6.3 replace the lubricating oil of the compactor cylinder gearbox
25	2.4.6.4 check and adjust the brake shoe clearance

3.4 Maintenance methods and procedures

3.4.1 Daily maintenance (10 hours of work)

3.4.1.1 Add fuel

A capacidade do tanque de combustível é suficiente para atender às condições de um dia inteiro de trabalho, therefore it is necessary to refuel daily before operating the machine. It is possible to refuel only the sufficient amount for the work that will be carried out on that day, however usually it is completed tank.

Open the fuel filler cap and add fuel using a fuel pump.

Check if the tank is full by the value indicated on the fuel pump or through the fuel level gauge.

Press the fuel nozzle.

 **Notice**	**Do not operate the engine before adding fuel.**

3.4.1.2 Check the hydraulic oil level (figure 3-2)

Check the hydraulic oil level sight gauge. If the level is... below the intermediate position, add hydraulic oil like this what for possible.

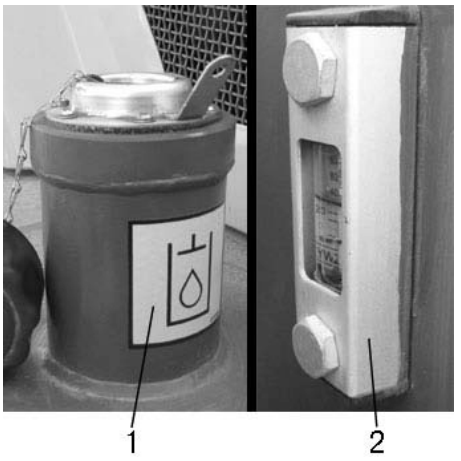


Figure 3-2

1 Indication of the oil addition location hydraulic
2 Hydraulic oil level gauge

3.4.1.3 Check the engine oil level (figure 3-3)

Open the rear hood.

Remove the oil level dipstick, clean it, and put it back. again.

(3) Remove the dipstick again. The indicated level should to be between the minimum and maximum marks. If it is below from the minimum mark, add oil in a timely manner.

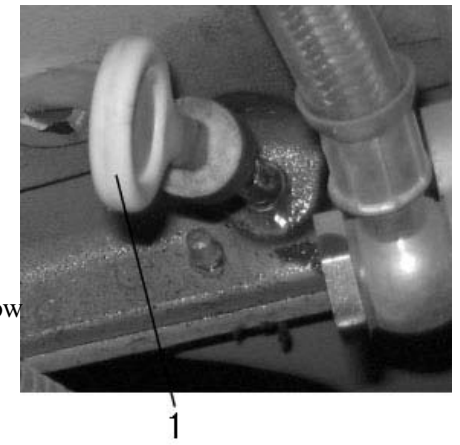


Figure 3-3

1. Engine oil level dipstick

Notice	**When opening the rear hood, prop it up with a support to avoid accidental falling and possible serious injuries (figure 3-4).**

3.4.1.4 Check the level of the liquid reservoir cooling (figure 3-5)

First, turn the pressure lid ¼ of a returns to release the pressure in the tank and remove it completely when the pressure is stabilized. Check the liquid level of cooling and fill the tank if it is necessary.

Press the pressure lid.

Figure 3-5

1 Pressure lid
2 Supply jar of the tank

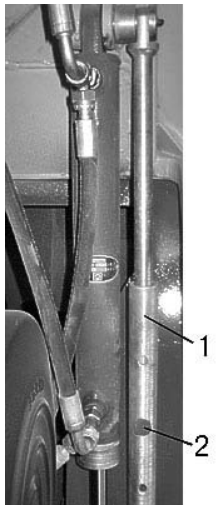


Figure 3-4

1 Support
2 screw and nut

Attention	**Always open the lid using a cloth to avoid burns on your hands due to the temperature of the reservoir.**

3.4.1.5 Adjust the scraper spacing (figure 3-6)

Check the gap between the scraper and the surface of the compactor cylinder. The recommended value is between 20 and 30 mm. Adjust the gap when this value is much larger or younger.

Loosen the scraper screws and adjust the clearance. Finally, open the screws again.

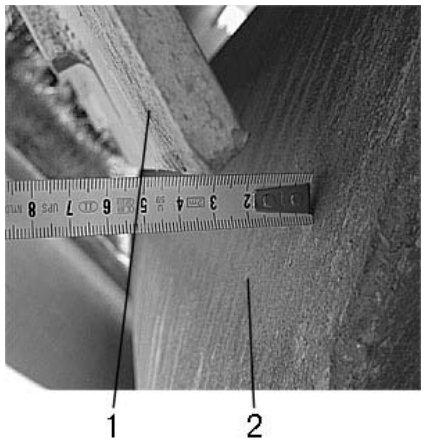


Figure 3-6

1 Scraper
2 Surface of the compactor cylinder

3.4.1.6 Verify the vent plug (figure 3-7)

The vent plug is located on the right side of the cylinder. compactor and is used to exchange the internal air and the air external during the vibration.

Check if the breather plug is blocked. If necessary to clean it, follow these instructions:

Loosen the cap to remove the breather plug and wash it. with gasoline.

When the plug is dry, insert it again and Close it with the plastic lid.

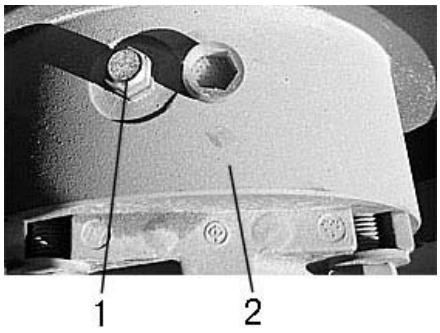


Figure 3-7

1 Breather plug
2 Motor coupling plate

3.4.1.7 Check and tighten the screws and nuts (figure 3-8)

Check and tighten all screws and nuts.
mainly from the main parts, such as the spherical nuts between the transmission axis and the wheel rim (figure A), the connection screw between the cabin and the rear chassis (figure B), the connection screws of the articulation mechanism (figure C), the connection screws of the blocks of damping (figure D), etc.

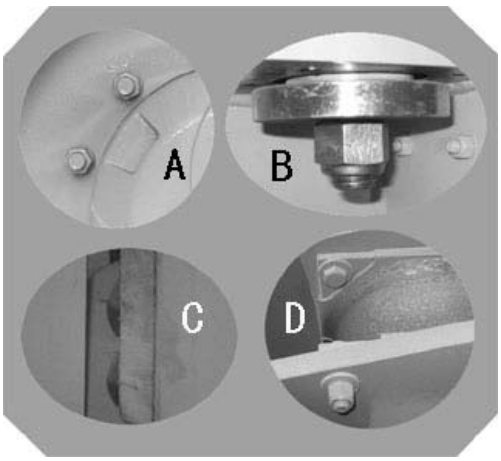


Figure 3-8

3.4.1.8 Clean the air filter (figure 3-9)

Press the dust reservoir and remove the dust when the seal lip opening.

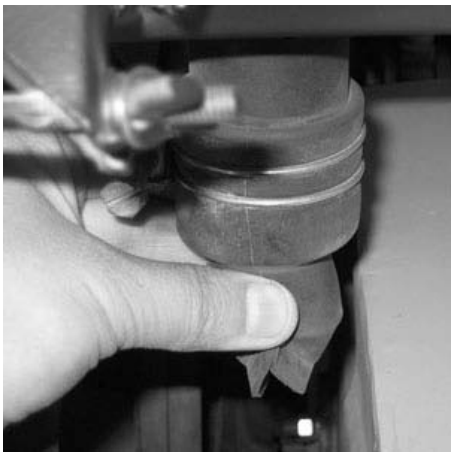


Figure 3-9

3.4.2 Weekly maintenance (50 working hours

3.4.2.1 Check and clean the air filter (figure 3-10)

This series of engines features a high-speed turbocharger rotation and high sensitivity to dust. Therefore, the inspection and cleaning of air filters are essential.

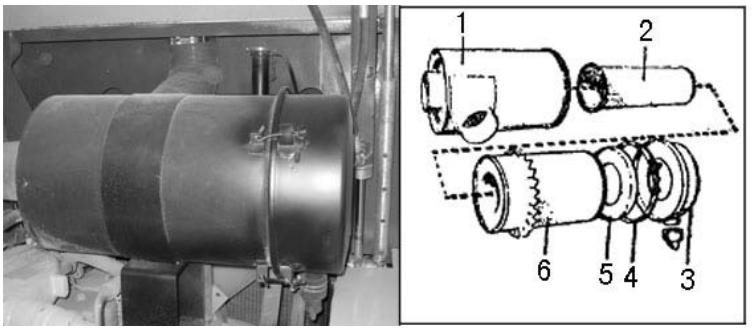


Figure 3-10

1 Alojamento 2 Filtro de segurança
3 Tampa terminal (reservatório de poeira) 4 Abraçadeira
5 Internal Tampa 6 Main Filter

Start the engine and operate it at nominal speed while observing the air filter warning light. on the instrument panel. If the light comes on, it will be necessary to clean or replace the filter.

Open the lid and remove the main filter (without moving the safety filter).

(2) Clean the main filter using compressed air with a maximum pressure of 500 kPA. Apply the air compressed up and down in the filter, always maintaining a minimum distance of 20 to 30 mm between the injector and the filter.

Attention	**Use safety goggles when working with compressed air.**

Wash the housing, the terminal cover, and the inner cover.

(4) Reinstall the components when they are dry.

Check if the connection between the air filter and the engine mount is loose and if there are leaks in the manifold. of admission.

The main filter can be cleaned up to five times and must be replaced after the 5th wash. The filter of the security must be replaced along with the main filter.

3.4.2.2 Lubricate the parts of the articulation mechanism (figure 3-11)

Lubricate all four lubrication cups located on the articulation mechanism.

Turn the steering wheel left and right to expose the lubrication cups.

Danger	**Safety notice (figure 3-12)! The engine must be turned off during operation of lubrication.**

Clean the parts around the lubrication cup.

Utilize a greaser (consult various tools) to fill each of the four cups with lubrication in about five cycles (or according to oil overflow).

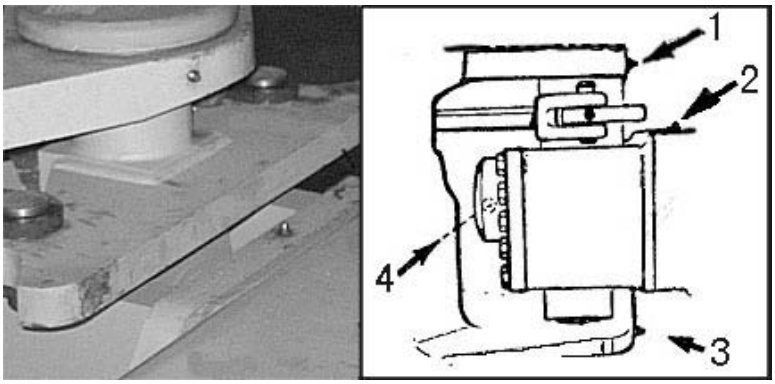


Figure 3-11

Lubrication cup 1, 2, 3, 4

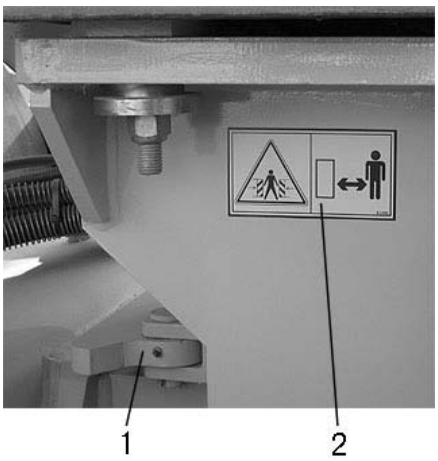


Figure 3-12

1 Articulation mechanism
2 Collision Risk Area Signal

3.4.2.3 Lubricate the parts of the steering cylinder (figure 3-13)

The steering cylinder has four lubrication cups, 2 on each side of the rear chassis (for to access one of them, it is necessary to open the door of the battery box and pump unit, where there will be piping exclusive for the lubrication cup, figure A), and 2 on both sides of the steering connection plate (under the booth) (figure B).

Clean the areas around the lubrication cup.

(2) Use a grease gun (refer to various tools) to fill each of the four cups with lubrication in about five cycles (or according to oil overflow).

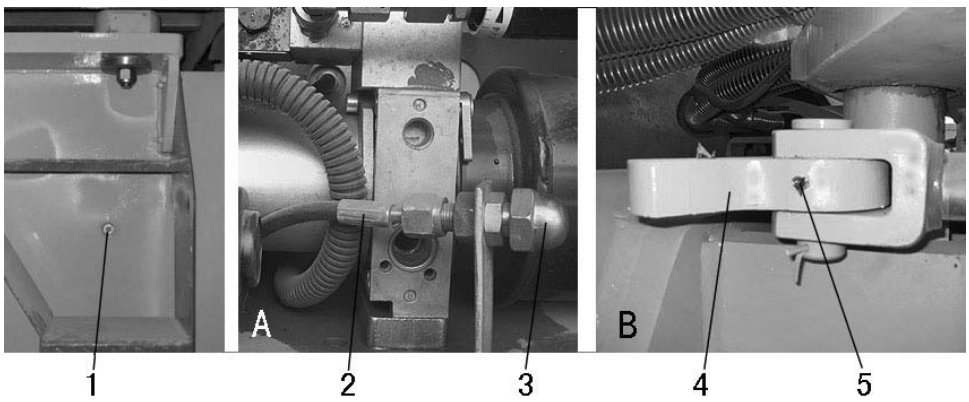


Figure 3-13

1 Copo de lubrificação 2 Tubulação especial 3 Tampa roscada (copo de lubrificação do lado de dentro)
["4 Steering connection plate","5 Lubrication cup"]

3.4.2.4Verificar a pressão dos pneus (figura 3-14)

Use the tire pressure gauge (refer to the tools)
various) to check the tire pressure.

The normal range for tire pressure is 160 to 180 kPa.

If the tire is filled with liquid, the valve needs to be in the vertical position when it is inflated.

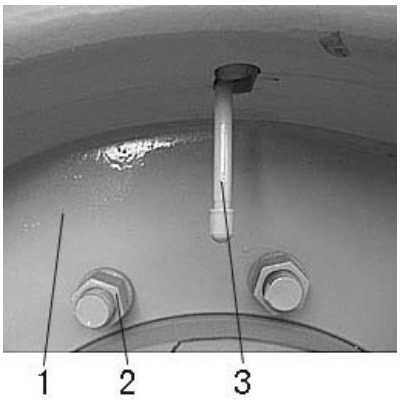


Figure 3-14

1 Aro da roda 2 Porca esférica
3 Valve

3.4.3 Weekly maintenance (20 hours of work)

3.4.3.1 Check the oil level of the compactor cylinder (figure 3-15

(1) Drive the roller on a level surface (it will be I need two people for this job, one to lead the roller compactor and another to observe the plug on the side left of the compactor cylinder). Stop the compactor roller com o bujão na vertical e pressione o botão de parada de emergency.

(2) Check the oil level through the level sight. If the if the level is low, add clean oil through the plug hole from supply to the intermediate position.

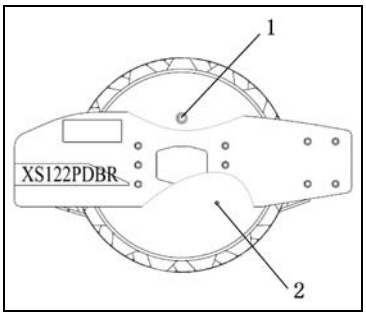


Figure 3-15

1 Supply cylinder
2 Level indicators

3.4.3.2 Check the level of the front wheel hub. (Figure 3-16)

Drive the roller slowly and adjust the position of the reducer as the figure shows, the nozzle 1 is for placing oil located in the direction of 12 o'clock. Clean the nozzle 3.

(2) Turn the nozzle 3 screw if oil has leaked out.
fora means the amount of oil is sufficient. In otherwise, you have to add the gear oil.
Open mouth 1, and add oil until it overflows.
bocal 3.
Warning: Do not put too much oil from gear, otherwise it will cause overheating of reducer.

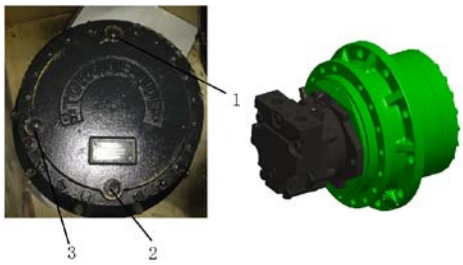


Figure 3-16

3.4.3.3 Verify the shock absorbing blocks of the compactor cylinder

Check the right and left rubber damping blocks of the compactor cylinder. Replace them in a timely manner if they show significant damage.

(2) When more than three damping blocks on one side show cracks of 10 to 15 mm. depth, it will be necessary to replace all the blocks on the side in question. The rigidity of the blocks of left damping is different from the stiffness of the right blocks, therefore the blocks cannot be replaced between sides.

3.4.3.4 Check the oil level of the axle of transmission (figure 3-17)

Park the roller compactor at um terreno nivelado e desligue o motor.

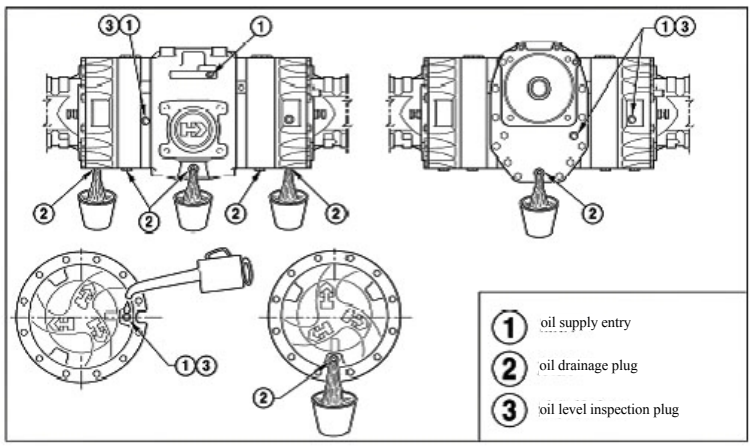


Figure 3-17

Check the oil level in all inspection plugs, without exceptions. If the level is low, Add clean gear oil through the filling plugs until oil spills occur.

Danger	**It is prohibited to work under the roller compacting machine while the engine is running. operation!**

3.4.3.5 Check and clean the radiator (figure 3-18)

Check regularly (or when the cooling is weak) if the radiator surface is clean. If it is necessary, clean the radiator with compressed air with pressure maximum of 500 kPa.

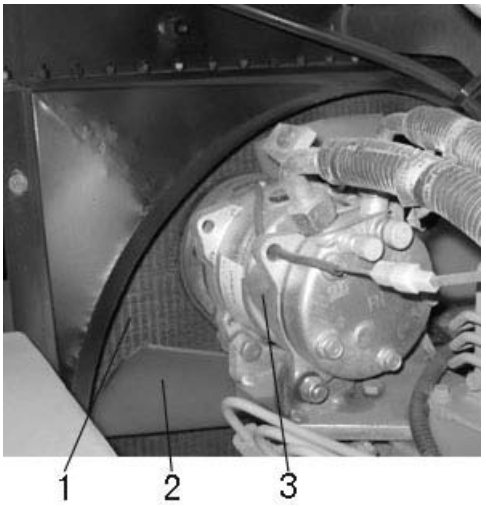


Figure 3-18

1Radiador 2Ventilador
3 Air conditioner compressors

3.4.3.6 Verify the intake manifold (figure 3-19)

Check if the intake manifold has cracks or check if your connections are secure.

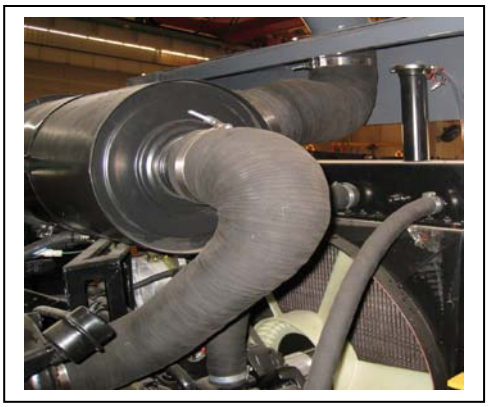


Figure 3-19

3.4.3.7 Air conditioning maintenance

Check the maintenance intervals for the cooling system, the compressor, and the circuits in the table. 3-8. Refer to the specific air conditioning maintenance instructions in the "Operation Manual" Air Conditioning Maintenance

Table 3-8

System components		Maintenance service	Maintenance interval		
			monthly	semi-annual	annual
System of cooling	Tube of refrigeration	Check if the tube is in good condition. conditions and if it is spent		※	
	Connector	Check for leaks			※
	Condenser	Check the conditions of the heatsink of heat		※	
	Reservoir	Check the terms of use or substitution			※
	Liquid of cooling	Check the conditions of the liquid cooling	※		
	Body of air conditioned	Check the conditions of the elements of the fixation of the air body conditioned			※
	System of seal	Check the conditions of the seals and replace them in a timely manner			※
Compressor	Clutch electromagnetic	Check the operation of the clutch		※	
	Leather belt	Check the voltage and the conditions of the belt			※
	Support of assembly	Check the installation and make sure that is not loose			※
	Compressor	Check for any noise abnormal	※		
Circuits	Wiring	Check if the wiring is in good condition conditions		※	
	Connectors	Check if the connectors are in good conditions		※	
	Switch of control	Check if the control switch is in good condition		※	

3.4.4 Quarterly maintenance (500 hours of work)

3.4.4.1 Replace the fuel filter

Consult the "Engine Operation and Maintenance Manual."

3.4.4.2 Replace the oil filter

Refer to the 'Operation and Maintenance Manual for the Engine'.

3.4.4.3 Replace the hydraulic oil filter (figure 3-20)

Figure 3-20

The hydraulic system uses two filters. Follow the instructions below for replacing the filters.

Open the rear hood

Clean the area around the filter, especially the threaded connection, and loosen the filter.

Clean the sealing surface of the filter base.

On the sealing surface of the new hydraulic oil filter, apply a thin layer of hydraulic oil to rubber sealing joint surface.

Install the filter by turning it manually, then tighten the rubber sealing gasket at the base of the filter and press the semicircle.

Start the engine and check for leaks in the filter. Also, check the oil level. hydraulic.

3.4.4.4 Lubricate the hinges and other parts of the hood (figure 3-21)

Use a shoe shine applicator (consult various tools) to supply the hinges (figure A), the parts of the cylinder of elevation (figure B) and other lubrication cups of the rear hood in about three cycles (or according to the overflow of oil).

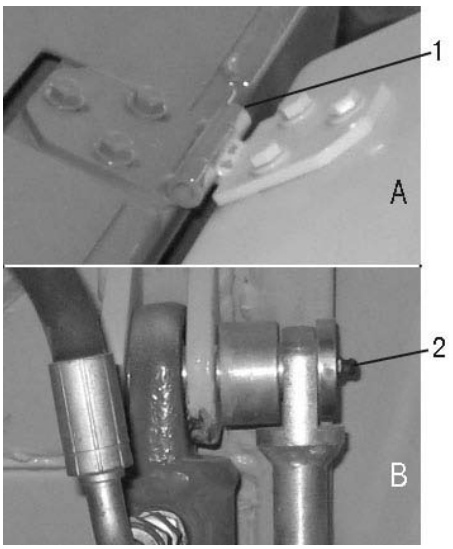


Figure 3-21

Lubrication cup 1.2

3.4.4.5 Replace the lubricant oil of the drive axle (figure 3-17)

Replace the transmission shaft lubricating oil after the first 100 hours of use, and replace it again every 500 hours.

Park the compactor on level ground and turn off the engine.

(2) Position a container under each drain plug. Clean around the drain plug. oil and remove the plug. After draining all the oil, tighten the plug immediately afterward (it will be necessary replace the seals).

Add clean gear oil through the fill spout until the oil spills out of the opening. and tighten the plug (it will be necessary to replace the seals).

3.4.4.6 Battery Maintenance (figure 3-22)

Notice	**Never smoke or allow open flames near the battery.** **Never lean metal tools on the battery**

Attention	**In case of a short circuit, immediately disconnect the circuit with a material insulating, being careful not to touch it.** **Carry out the refilling in a ventilated environment and preferably at a temperature environment.**

Open the battery box and pump unit door and check for damage on the battery surface. Make sure that there are no acid leaks, cracks, bulges or dirt.

Check the battery status indicator (photoelectric cell) and confirm the battery recharge.

Green: sufficiently charged, it can be used. normally

Black: low load, recharge needed

White: battery scrap, replacement necessary

Clean the battery terminals and check the elements of fixation.

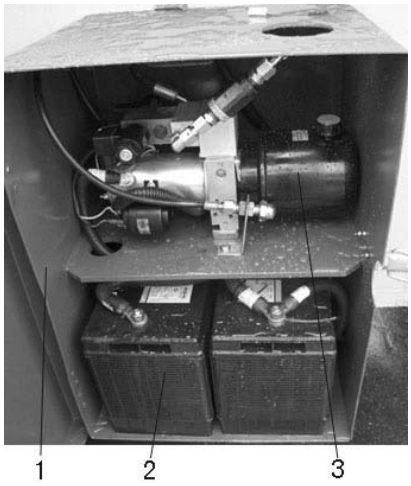


Figure 3-22

1 Battery box and pump unit
2 Battery
3 Hydraulic pump unit

3.4.5 Semiannual maintenance (1,000 hours of work)

3.4.5.1 Clear condensation and sediments in the hydraulic oil tank (figure 3-23)

Park the roller on level ground and turn off the engine.

Release the oil drain plug (place a container with a capacity of about 15 liters below the plug), purge the condensed oil and the sediments found inside the tank and install the plug immediately when the hydraulic oil flow is clean.

This operation must be performed whenever the work is interrupted for more than 10 hours.

3.4.5.2 Clean condensation and sediments in the fuel tank (figure 3-24)

Park the roller on level ground and turn off the engine.

Remove the drainage plug (position a container with a capacity of about 15 liters underneath it valve), purge the condensed fuel and the sediments found inside the tank and install the plug it immediately when the fuel flow is clean.

This operation must be performed whenever the work is interrupted for more than 10 hours.

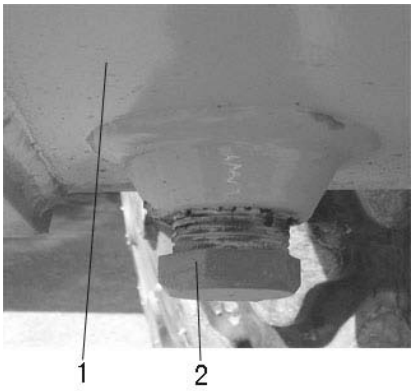


Figure 3-23

1 Hydraulic oil tank
2 Oil drainage plugs

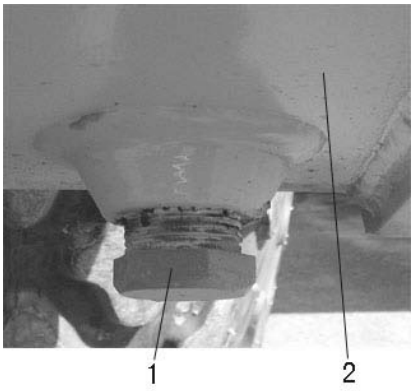


Figure 3-24

1 Oil drainage plug
Fuel tank

3.4.5.3 Replace the hydraulic pump unit (figure 3-22)

First, empty the pump and the hydraulic oil line before refilling them.
clean hydraulic oil. After the operation, raise and lower the rear hood once and add hydraulic oil until about 3 cm from the tank opening (remove the joints).

3.4.5.4 Check the engine valve clearance

Refer to the 'Operation and Maintenance Manual of the Engine'.

3.4.5.5 Verify the tension of the engine transmission belt

Refer to the "Operation and Maintenance Manual of the Engine."

3.4.6 Annual maintenance (2,000 hours of work)

3.4.6.1 Replace the hydraulic oil (figure 3-2, figure 3-20, figure 3-23)

All the hydraulic system oil must be replaced once a year. Carry out the replacement following the following instructions:

Park the roller on a level surface and turn off the engine.

Release the drainage plug (place a container with a capacity of about 240 liters underneath the plug) and purge all the oil from the hydraulic tank.

Clean the oil drain plug and reinstall it.

Replace the hydraulic oil filter.

Open the supply nozzle cap and fill with new hydraulic oil to the correct level.

Clean hydraulic oil is essential for the operation of the compactor roller, therefore its replacement is mandatory.

3.4.6.2 Replace the lubricating oil of the compacting cylinder reducer (figure 3-15)

All the lubricating oil in the vibro chamber of the compactor cylinder must be replaced once a year.
Make the substitution following the instructions below:

Drive the roller on a leveled terrain (it will take two people for this job, one
to operate the compactor and another to observe the plug on the left side of the cylinder
Stop the compactor with the plug in the vertical position and press the stop button.
emergency.

(2) Release the oil drain plug, purge all the oil from the vibration chamber (position a container with a capacity of about 60 liters under the plug) and clean the plug.

Drive the roller and when the plug is vertical, stop the machine and turn off the engine.

Add the gear oil through the fill plug hole until it reaches the intermediate position.
then press the plug.

3.4.6.3 Replace the lubricating oil of the compactor cylinder reducer

All the lubricating oil of the compactor cylinder reducer must be replaced once a year. Perform the replacement following these instructions:

Park the roller on level ground and turn off the engine.

Release the oil drain plug and purge all the oil from the reducer (position a container with capacity of about 3 liters under the plug). Clean the surface of the plug, then reinstall it and open it.

Add the gear oil through the fill plug until it overflows from the opening.
Then reinstall and tighten the fuel cap.

3.4.6.4 Verify and adjust the brake shoe clearance (figure 3-25)

Attention	**The slack of the brake lining should be checked annually, especially the following problemas: ruídos incomuns durante a frenagem, perda de desempenho de braking, changes in brake fluid and changes in brake pressure.**

Park the compactor on a level surface and turn off the engine.

Danger	**It is forbidden to work under the compactor while the engine is running. operation!**

(2) Wear check: Remove the oil level plugs (of two sides of the axle casing and check, with the tool of test, if the minimum slack of the canvas the disc brake is smaller than 4.5 mm.

(3) If the gap is greater than 5 mm, turn the adjustment screw until take the appropriate break

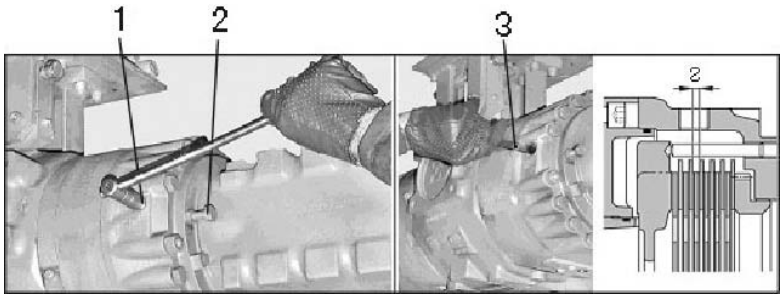


Figure 3-25

["1 Oil level gauge","2 Adjustment screw"]
3 Testing Tool

3.5 Other maintenance instructions

3.5.1 Recommended fluids under special conditions

The fluids supplied in the machine before delivery are listed in Table 3-1 and are used in ambient temperatures between -10ºC and 40ºC.

If the ambient temperature is between 40ºC and 60ºC or -30ºC and -10ºC, use the fluids listed in the Table 3-9.

Table 3-9

Name	Specification	Aplicação
lubricant	LUBRAX GL 5 80W90	vibration chamber of the compactor cylinder
	LUBRAX GL 5 80W90	reducer and drive shaft of the cylinder compactor
engine oil	Lubrax Top Turbo 15W40	motor
oil hydraulic	LUBRAX HYDRA XP 68	hydraulic oil system
fuel	S500 (COMMON DIESEL)	fuel system
liquid of cooling	LUBRAX RADIATOR FLUID -37,5°	coolant reservoir

3.5.2 High Pressure Cleaning

When using a pressure washer to clean the roller compactor, remember not to direct the high pressure jet directly on the hydraulic tank cap or the fuel tank cap!
Cover the tank caps with a plastic bag and rubber seals to prevent water from entering. reservoirs.

Do not spray water directly on electrical components and the dashboard.

3.5.3 Rollover Protective Structure (ROPS) system

Welding or drilling operations on the rollover protection or safety cabin are strictly prohibited under any circumstances.

Do not attempt to repair a ROPS or safety cab. If they are damaged, they must be replaced immediately.

3.6 Common Failures and Troubleshooting

Table 3-10

Request	Feature of the failure	Cause of failure	Solution
Motor	Difficulty in the match	Lack of fuel	Refuel
		Obstruction in the piping of oil	Clean or replace the filter
		Oil pump failure	Repair or replace
		Injector failure	Repair or replace
		Weak battery	Load or replace
		Failure in the electrical circuit	Repair or replace
	Abnormal smoke	Overload	Select the gear correct
		Presence of air in the oil	Purge
		Presence of water in fuel	Replace the fuel
		Clogged air filter	Inspect, clean or replace
		Excess oil	Verify and adjust the amount of oil
		Engine temperature very low	Check the system of cooling and the thermostat
	Engine overheating or alarm	Broken or loose belt	Check the tightness or replace
		Ambient temperature very high	Check or wait for the machine recovery
		Oil level very high or very low	Reduce or increase

Motor	Engine overheating or alarm	Lack of sealing in the collector of admission	Check and adjust or replace
		Damage or obstruction in radiator	Replace or clear
		Turbocharger failure or in the air filter	Verify and adjust
		Obstruction in the vents	Check and adjust
	Increase in consumption of oil	External leaks in lubrication system	Inspect and seal
		Leak in the radiator of oil	Check, repair, or replace
		Turbocharger failure	Repair or replace
		Compressor failure (leak of the compressor	Repair or replace
	Low oil pressure	Oil level very low you are very tall	Check the oil level, add or drain
		Meter or sensor of pressure does not work correctly	Verify and replace
		Obstruction in the oil filter	Inspect, clean or replace
		Pressure regulator not it works	Repair or replace
		Lack of sealing in the tube of suction	Repair or replace
	High oil pressure	Meter or sensor of pressure does not work correctly	Check and replace
		Operating temperature of very low motor	Verify the system of cooling, repair or replace
		Oil specification incorrect	Replace the engine oil for a with the specifications
		Failure in the regulator of pressure	Repair or replace
	Engine cutoff	Impurities in the water or in fuel	Remove the impurities, replace the filter
		Presence of air in the system of oil supply	Verify if there is leaks in the system of fuel, bleed the air
		Oil pump failure	Replace the pump

Cylinder compactor	No vibration	Electrical failure	Check and repair
		System failure of hydraulic vibration	Check and repair
		Wear of the grooved glove of transmission axis	Check and replace
		Vibration bearing burnt	Verify and replace
		System failure of hydraulic vibration	Check and repair
		Stuck or spent reducer	Verify and replace
System of actuation hydraulic	The oil pressure does not auxiliaries	Oil level of the tank very low	Refuel with the appropriate amount
		Defect in the charging pump	Repair or replace
		Leak in the engine or in the bomb	Repair or replace the pump or the engine
	The average load pressure it is very low	Fault in the relief valve of load	Repair or replace
	The load pressure of the work is very low	Defect in the valve of download	Repair or replace
	The system does not return to central position, or returns in an abnormal position	Defect in the connection of pump control	Repair or replace
		Defect in the servo valve	Adjust, repair or replace
		Pump defect	Repair or replace
		Defect in the control of bomb	Repair or replace
	The unidirectional system does not it's working correctly	Defect in the servo valve	Repair or replace
		Fault in the valve of retention	Repair or replace
		Oil level in the tank very low	Restock with the adequate amount
		Fault in the control of bomb	Repair or replace
		Defect in the servo valve	Repair or replace
		A unidirectional valve is defective set	Repair or replace
	The bidirectional system does not it's working correctly	Oil level of the tank very low	Refill with the adequate amount
		Defect in the control of bomb	Repair or replace
		Defect in the servo valve	Repair or replace

System of activation hydraulic	The output torque of the engine it's very low	Working pressure of very low engine	Regular the pressure of system
		Displacement situation abnormal motor	Adjust, repair or replace
		Leak in the engine or in the bomb	Adjust, repair or replace
	The output speed of the motor is abnormal	Oil level of the tank very low	Restock with the appropriate amount
		Abnormal load pressure	Regular the pressure
		Pump output flow abnormal	Regular the flow value
		Movement control abnormal	Adjust, repair or replace
		Very high engine speed low	Adjust for speed adequate
	Slow response from the system	Abnormal system pressure	Adjust or replace
		Defect in the suction filter	Replace
		Abnormal load pressure	Adjust the pressure value
		Leak in the engine or in the bomb	Adjust, repair or replace
System of vibration hydraulics	Vibration-free system	Oil level of the tank very low	Refill with the appropriate amount
		Defect in the relief valve of the pressure in the pump	Repair or replace
		Damaged motor or pump	Replace
	The frequency of vibration it is low	Tank oil level very low	Replenish with the appropriate quantity
		Pump discharge flow abnormal	Regular the value of the flow
	Locked vibration	Stuck solenoid valve or damaged	Repair or replace
		Obstructed orifice	Clear
System of direction	Heavy flywheel	Lack of oil in the pump	Check the pump
		Oil level of the tank very low	Replenish with the appropriate amount
		Oil with high viscosity	Use the recommended oil
	Unloaded direction Light and heavy load of direction	Low pressure at the valve of relief	Adjust
		Stuck relief valve	Repair or replace
	Steering failure	Defect in the steering box	Repair or replace

Braking system	Locked brake	Low pressure in the system	Perform tests and eliminate the problem
		Brake pads sintered	Substitute
	The brake does not work.	Very high braking pressure high	Conduct tests and eliminate the problem
		Brake pad clearance very big	Adjust
		Damaged brake shoe	Replace

4. Transport and Storage

4.1 Transport

4.1.1 Use a ramp for loading the compactor roller

Figure 4-1 illustrates the transport of the roller compactor on a truck via a ramp. The ramps used for loading typically have a slope of ≤ 20% (α ≈ 11.3°) and can be made of a rigid material or metal.

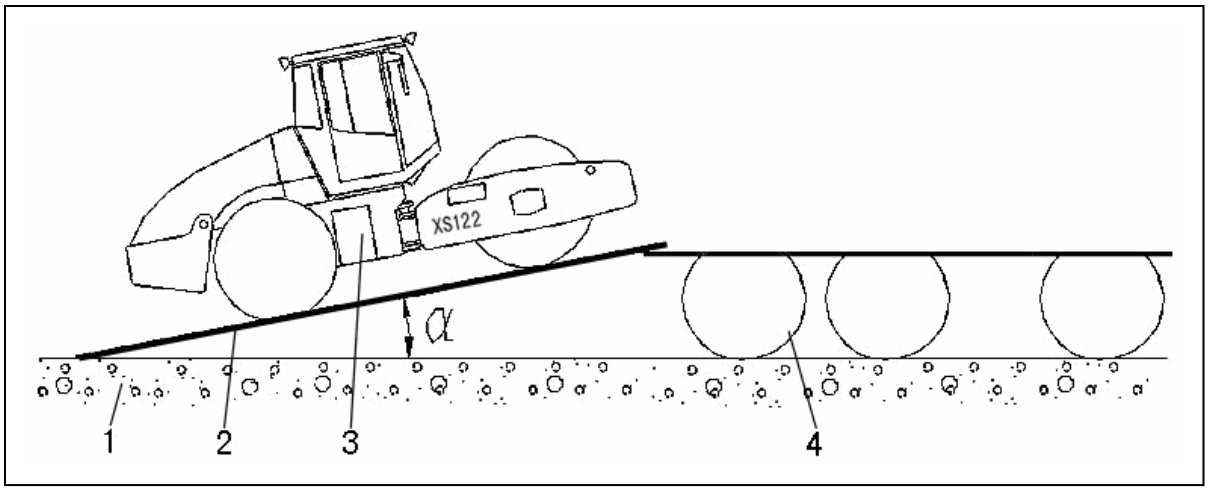


Figure 4-1

1 Pavimento 2 Rampa metálica 3 Rolo compactador 4 Máquina de transporte

Danger	**Do not use deteriorated ramps, such as rusty metal ramps.** **Make sure to position the ramp correctly between the pavement and the machine. transport** **Ensure that there is no presence of oil, ice, or mud on the surface of the ramp.**

4.1.2 Fixing of the compactor roller

Figure 4-2 illustrates the method of securing the compactor roller to the transport machine using ropes. Do not tighten the strings too much, as this may damage the rubber damping blocks.
Also position wedges on the rear wheels and on the compactor cylinder so that the machine does not roll or fall. from the transport machine.

The locking mechanism of the front and rear chassis must be locked (figure 4-3).

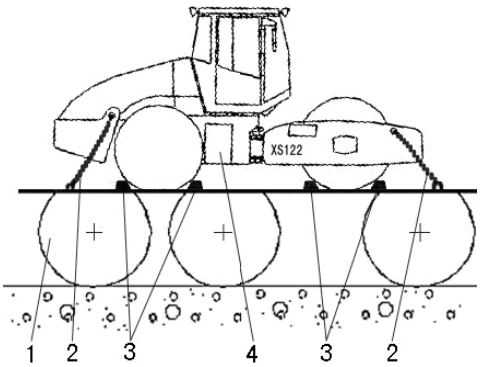


Figure 4-2

1 Máquina de transporte 2 Corda 3 Cunha 4 compactor roller

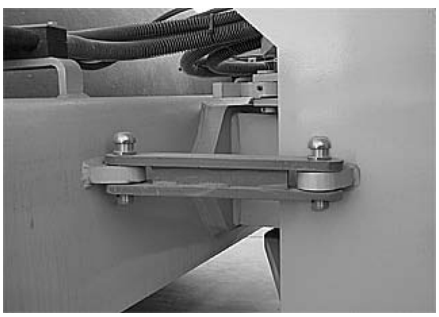


Figure 4-3

4.1.3 Elevation of the compactor roller

Figure 4-4 illustrates the use of special tools for lifting the compactor roller. Refer to the weight limit on the lifting signal (figure 4-5).

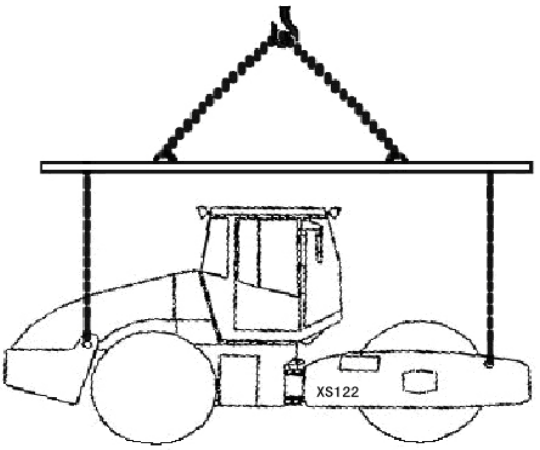


Figure 4-4

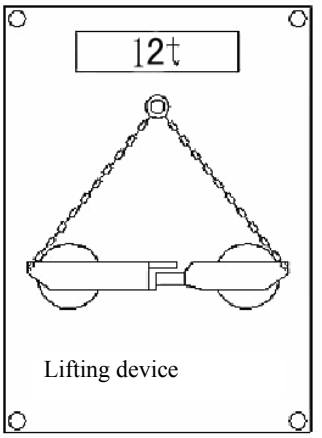


Figure 4-5

Danger	**The locking mechanism of the front and rear chassis must be locked during the elevation of the compactor (see figure 4-3).**

4.1.4 Towing of the compactor roller

4.1.4.1 Short-distance towing with operating engine

Open the rear hood and find the multifunction valve of the pump. activated.

Turn the fastening nut counterclockwise, release the valve and tighten the nut again.

Start the engine and let it idle.

When towing the compactor roller with the engine running (and the the steering system functioning correctly), it is possible make turns with the machine while towing.

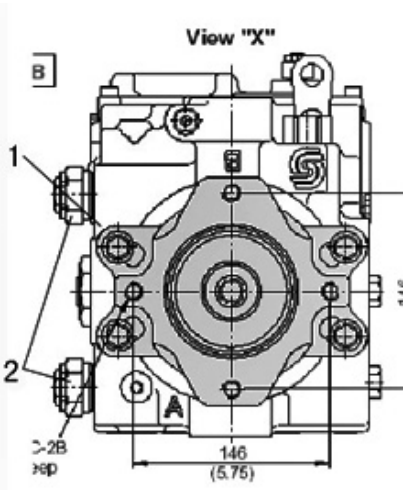


Figure 4-6

1 Multifunction valve body
2 Fixing clamps

4.1.4.2 Short-distance towing with inoperable motor or pump

Remove the backup manual pump from the tank (figure 4-7) following the instructions in Figure 4-8.

(2) Open three interfaces (EL10LOMD) in X7(b) of the brake valve of the powered pump, and connect to P of the manual pump.

(3) Connect the manual pump to the access inlet of the hydraulic tank, or remove the brake return tube. to connect to the oil inlet port of the manual pump. Operate the manual pump slowly until remove the brake, maintaining a pressure of 2~3 Mpa, slowly towing the machine to a location adequate.

Press the end of the cut-off valve handle, restoring the brake state.

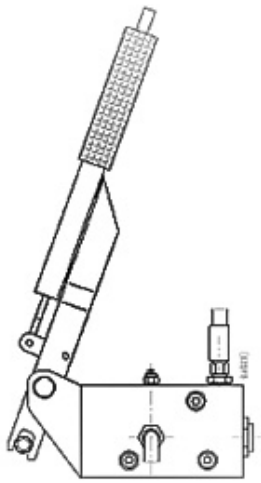


Figure 4-7

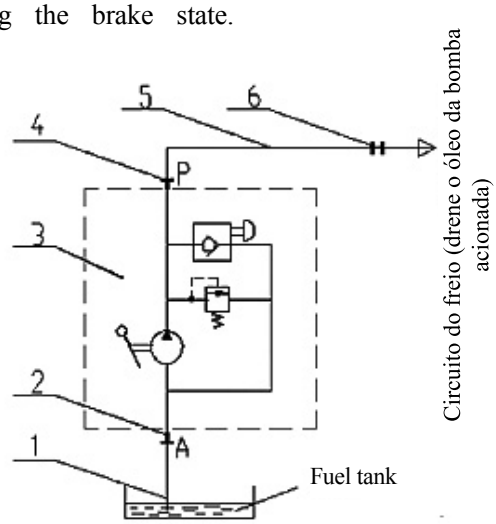


Figure 4-8

Danger	**Use a rope for towing only for ascents. For descents, use a rigid drag bar.**

Notice	**The towing speed should not exceed 1 km/h and the distance traveled should not exceed 300 meters.**

4.2 Storage

4.2.1 Daily storage and protection

- After finishing the work, park the compactor on a level ground. If necessary When parking on a slope, block the rear wheels with wedges to prevent accidents.
- Before leaving the compactor, turn off the engine and engage the parking brake.
- Make sure that the locking mechanism of the front and rear chassis is locked.
- Turn off the main battery switch and lock all parts of the machine. Remove the key and store it with care.

4.2.2 Short-term storage (less than three months)

- Clean the dirt and dust from the machine, especially on the generator, the starter motor, and the injectors. fuel, in pumps and hydraulic motors and in hydraulic piping, using a dry cloth and soft.
- Use kerosene to clean the lubrication points of the parts and add lubricating grease.

4.2.3 Long-term Storage

4.2.3.1 Storage locations

- Store the machine in dry and well-ventilated places.

Figure 4-9

- If it is necessary to store the machine outdoors, park it on a concrete floor in a location free from hazardous substances like corrosive gases, cover it with a tarpaulin and tie it down well (figure 4-9).

4.2.3.2 Storage

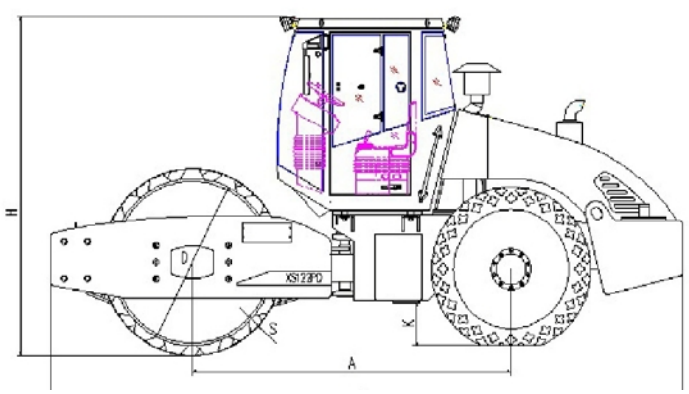
- Ligue a máquina uma vez por mês em velocidade baixa por meia hora para que todos os sistemas do the roller compactor should be lubricated and add grease lubricant to the lubrication points.
- Regularly check the surface of the machine and the corrosion protection materials, etc.

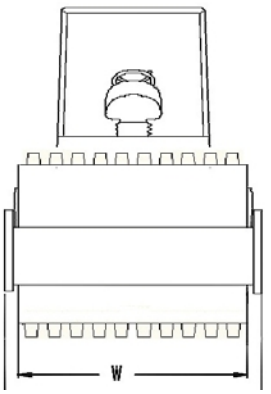
4.2.4 Use after long-term storage

- Remove the cover from the roller compactor.
- Clean the protective coating on the areas where there are any.
- Recharge, install and connect the battery.
- Purge the impurities from the lubricating oil of the engine's crankcase and the reducer and transmission shaft. compactor
- Replace the lubricating oil in the vibration chamber of the compactor cylinder.
- Purge the water and impurities from the hydraulic tank and the fuel tank.
- Add lubricating grease to the lubrication points.
- Carry out the normal inspections before operation.

5. Technical Specifications

XS122PDBR





Dimension (mm)	A	B	D	H	K	L	S	W
XS122PDBR	3.010	2,300	1.523	3.150	400	5.970	30	2.130

Unit		**XS122PDBR**
Weight		
Operational weight	kg	13,000
Weight in the compactor cylinder	kg	7.700
Weight on the rear wheels	kg	5.300
Performance data of the displacement		
Speed of movement (1st gear)	km/h	0~4,8
Speed of movement (2nd gear)	km/h	0~10.4
Theoretical tilt capacity	%	45
Minimum external turning radius	mm	6.800
Traction system		
Engine manufacturers		Cummins
Model		4B3.9
Cooling mode		Chilled water
Number of cylinders		4
Rated power	kW	93
Nominal rotation	RPM	2.200
Fuel		Diesel Oil
Electric tension	V	12

Drive System		
Mode of operation		Closed hydrostatic
Braking system		
Service brake		Hydraulic
Parking brake		Mechanical/Hydraulic
Emergency brake		Mechanical/Hydraulic
Steering system		
Driving mode		Articulated
Control of the steering		Hydraulic pressure
Vibration system		
Vibration mode		Closed Hydrostatics
Vibration frequency	Hz	30/35
Nominal amplitude	mm	1,7/0,85
Excitation force	kN	280/190
Tires		
Size		23.1-26
Layers		12
Pressure	kPa	150~170
Capabilities		
Motor oil	L	16.3
Fuel tank	L	200
Hydraulic tank	L	200
Cooling liquid	L	20
Vibration chamber of the compactor cylinder	L	40
Compacting cylinder reducer	L	2.7

XS122PDBR
Lubricants and fluids

XCMG only approves the use of Petrobras lubricants and cooling fluids.
cited in the table below and links the equipment warranty to the exclusive use of the same.

	Application	Specification	Petrobras product
1	Engine oil	API CH-4 SAE 15W40	**LubraxTopTurbo**
2	Transmission oil	API GL-5 SAE 85W90	**Lubrax GL-5 80W90**
3	Hydraulic system oil	HLP (ISO HM) ISO VG 68	**Lubrax Hydra XP 68**
4	Cooling fluid	ASTM D3306 ASTM D4985	**Lubrax radiator fluid HD2 ready for use**

SAC Petrobras 0800 78 9001 - www.br.com.br

XCMG BRAZIL INDUSTRIAL LTD

Address: Fernão Dias Highway - BR381 km 854/855 Industrial District
Pouso Alegre - MG
CEP 37550-000-Brasil
Tel.: 55-035-2102-0510
E-mail: contato@xcmg.com

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