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Dear customers, thank you for choosing BeiYi Mechanical in many brands. In order to use your equipment more convenient and safe, BeiYi Mechanical is hereby equipped with After-sales Service Card for each customer, if you encounter any problems in the use of the North BeiYi Mechanical equipment, please call the North BeiYi Construction after-sales hotline or add the North BeiYi Mechanical after-sales customer service Wechat Consultation, North BeiYi Mechanical sincerely for your service.

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BEIYI CONSTRUCTION

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侧式夹桩机

使用说明书

SIDE CLAMP PILE MACHINE
Operation Instruction



无锡市北奕挖掘机配件制造厂
WUXI BEIYI EXCAVATOR PARTS FACTORY

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重要说明 Important Illustrate

- 在第一次安装,运行或维修保养打桩锤之前,请仔细阅读本手册。请仔细解读并按照本手册运行,才能更好地保护用户者的安全。为避免不必要的伤害或损失,请始终遵守相关法则,法规和安全工作实践。
- Please read this manual carefully before installing, operating or servicing the pile hammer for the first time. Please read and operate this manual carefully to better protect the safety of the user. To avoid unnecessary injury or loss, please always comply with relevant laws, regulations and safe working practices.

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第一章 前言 Chapter I Preface

本手册包含安全,操作,润滑,维护等信息。
本手册既是新操作者的参考文件,也是有过操作经验人员的进修文件。
出现任何关于打桩锤的问题,请联系北奕机械售后部。

This manual contains information on safety, operation, lubrication, maintenance, and more.
This manual is both a reference document for new operators and a training document for experienced personnel.
If you have any questions about the pile hammer, please contact the after-sales department of Beiyi Machinery.

警告

- 请不要随意使用打桩锤于其他不相关的工作项目。
*如果不正确操作打桩锤,则会导致严重事故,甚至会造成人员伤亡。
*操作者及维修人员请仔细阅读本手册,然后进行打桩锤的相关操作或维修。
*如果本手册丢失或损坏,联系我们补发。
*如果打桩锤转让,请随附转让本手册。
为了安全起见,"安全预防措施"相关条目在本手册中给予了说明。

Warning

- Please do not use the pile hammer randomly for other unrelated work projects.
*If the pile hammer is not operated correctly, it can lead to serious accidents and even cause casualties.
*Operators and maintenance personnel are advised to carefully read this manual before carrying out relevant operations or repairs on the pile hammer.
*If this manual is lost or damaged, please contact us for a replacement.
*If the pile hammer is transferred, please attach this transfer manual.
For safety reasons, the relevant items of "safety precautions" are explained in this manual.

告知事项 Notice

1. 安装打桩锤的挖机须在安装试机调试完成后上工前,对于挖机本身液压油及滤芯做个更换保养,以确保打桩锤的液压系统及部件磨合顺畅,更为了保护挖机本身液压系统,任何的杂质都会对液压系统造成损伤损耗,因而产生故障,减短使用寿命。

1. Before starting work after the installation and commissioning of the pile hammer excavator, the hydraulic oil and filter element of the excavator itself must be replaced and maintained to ensure smooth running in of the hydraulic system and components of the pile hammer. In addition, to protect the hydraulic system of the excavator itself, any impurities can cause damage and loss to the hydraulic system, resulting in malfunctions and shortened service life.

2.新装的打桩锤有磨合期,为开始干活后的一周内,首次更换齿轮油为工作半天至一天后,而后每隔3天换一次,等于一周的磨合期内要更换3次齿轮油,磨合期过后根据工作时数来做定期保养,大概200个工作小时更换一次齿轮油,此周期根据干活力度不同可以适度增减,并在每次换油的同时把吸铁石清理干净。

2. The newly installed pile hammer has a break in period, and the first gear oil change within one week of starting work is half a day of work. After one day, change the gear oil every three days, which is equivalent to changing the gear oil three times during the one week break in period. Afterwards, perform regular maintenance based on working hours, replacing the gear oil approximately every 200 working hours. Depending on the intensity of the work, it can be moderately increased or decreased, and the magnet should be cleaned thoroughly every time the oil is changed.

3.吸铁石在箱体内主要是起过滤作用。桩锤在运转过程中,因为磨合产生铁粉末,经由吸铁石的磁力吸附来保持油质的干净度,进而减少运转过程中的磨损,所以定期清洁吸铁石也至关重要,大概在100个工作小时清洁一次,实际周期依据干活的强度增减。

3. The main function of the magnet inside the box is filtration. During the operation of the pile hammer, iron powder is generated due to running in. By using the magnetic adsorption of the magnet to maintain the cleanliness of the oil and reduce wear during operation, so regular cleaning of the magnet is also crucial, about once every 100 working hours, depending on the actual cycle. Increase or decrease according to the intensity of work.

4.每天上工前,利用10~15分钟的时间来做暖车,其原因是车子经过长时间的停放。发动机内机油流回下部的机油底壳内,在挖机发动后上部是缺乏润滑的状况,大约在发动30秒后才会因机油泵运转将机油送至最需要润滑的活塞.连杆.曲轴等部件,以降低各部件的损耗,暖车同时可顺带检查桩机各部位螺丝松紧,或是打打黄油来确保润滑。

4. Before going to work every day, take 10 to 15 minutes to warm up the car because the car has been parked for a long time. The engine oil flows back to the lower oil pan. After the excavator is started, the upper part is lacking in lubrication. About 30 seconds after starting, the oil pump will start to send the oil to the piston, connecting rod, crankshaft and other parts that need lubrication the most, so as to reduce the loss of each part. While warming up the car, you can also check the tightness of the screws of various parts of the pile driver, or apply butter to ensure lubrication.

5.打桩要懂得以柔克刚,越难打的越要耐住性子,以疏通方式来将桩打入到位。一级震动能干的动,就没必要为了求快而使用二级震动,要知道求快的同时,磨损损耗也是加大的,不管用的一级或是二级震动,在打桩进度缓慢的时候,适时将桩拔出1米~2米左右,借由桩机与挖机的动力经过1米~2米的辅助,同时作用便能将桩更深入地面。

5. When driving piles, you must know how to overcome hardness with softness. The harder it is to drive, the more patient you must be. Use the method of dredging to drive the pile into place. If the first-level vibration can move it, there is no need to use the second-level vibration for the sake of speed. You must know that while moving faster, wear and tear will also increase. Regardless of whether you use the first-level or second-level vibration, when the progress of piling is slow, pull the pile out about 1 to 2 meters in time. With the assistance of the power of the pile driver and excavator through 1 to 2 meters, the pile can be driven deeper into the ground at the same time.

6.在打桩时,将桩打入到位松开震动开关后,默数5秒再将牙板打开,可以降低牙板.扁担(连杆).销子及销子眼的磨损;在打桩到位松开桩机踏板开关的时候,桩机因为惯性而还有余震,在夹紧的状态下,各部件的连接是没有间隙的,所以磨损相对就降低了,最好松夹时机是在桩机停止震动后。

6. When piling, after driving the pile into place and releasing the vibration switch, count silently for 5 seconds before opening the tooth plate. This can reduce the wear of the tooth plate, shoulder pole (connecting rod), pins and pin eyes. When the pile is driven into place and the pile driver pedal switch is released, the pile driver will have aftershocks due to inertia. In the clamped state, there is no gap in the connection of the various components, so the wear is relatively reduced. The best time to loosen the clamp is after the pile driver stops vibrating.

7.旋转马达的设计是为了方便起桩与倒桩,桩在打入地面下,因阻力或是硬物而导致桩产生扭转的时候,严禁强行操作旋转马达来矫正桩位,在阻力或是扭力与振机的同时作用下,其载力是超出旋转马达的本身所能负荷的,时间长了便造成马达本身的金属疲劳而产生损坏。

7. The rotary motor is designed to facilitate pile lifting and pile removal. When the pile is driven into the ground and twisted due to resistance or hard objects, it is strictly forbidden to forcibly operate the rotary motor to correct the pile position. Under the simultaneous action of resistance or torque and vibration, the load capacity exceeds the load of the rotary motor itself. Over time, it will cause metal fatigue of the motor itself and cause damage.

8.同理,桩机在旋转方向过头的瞬间,反向操作也会造成旋转马达的过度受力而造成马达及其相关部件的损坏,所以马达的来回操作之间最好间隔1~2秒,以避免正反扭力造成马达及连接部件的负荷而减短使用寿命。

8. Similarly, at the moment when the pile driver rotates too far in the direction of rotation, reverse operation can also cause excessive force on the rotating motor, resulting in damage to the motor and its related components. Therefore, it is best to interval 1-2 seconds between the back and forth operations of the motor to avoid the load on the motor and connecting components caused by forward and reverse torque and shorten the service life.

9.驾驶员在干活的同时需时时刻刻注意设备的异常状况,例如:任何油管的异常抖动;设备的异常高温或是声响,一经察觉需立刻停机排查问题所在,细小的关注往往能避免设备的故障及损坏。

9. Drivers should always pay attention to any abnormal conditions of the equipment while working, such as abnormal shaking of any oil pipes; The abnormal high temperature or noise of the equipment, once detected, should be immediately stopped to investigate the problem. Small attention can often avoid equipment failure and damage.

10.小问题的不在意与不重视,往往是造成大问题的症结隐患,所以认识设备与爱惜使用设备,不但降低了设备的损耗及损坏,也降低维修成本,更免除了工期延误而产生的争议与事端。

10. Neglecting and neglecting minor issues is often the root cause of major problems. Therefore, understanding and cherishing equipment not only reduces equipment wear and damage, but also lowers maintenance costs, and eliminates disputes and incidents caused by project delays.

总结:

机械的使用,靠的是规范的操作以及定期的保养来降低故障率以及延续使用寿命,更能降低维修成本及减少工期的延误,要懂得用最小的付出及损耗来产生最大的利益,所谓事半功倍,所以日常的维护及保养至关重要。

Summary:

The use of machinery relies on standardized operation and regular maintenance to reduce failure rates and extend service life. It can also reduce maintenance costs and minimize project delays. It is important to know how to generate maximum benefits with minimal effort and loss. As the saying goes, twice the result with half the effort. Therefore, daily maintenance and upkeep are crucial.

第二章 产品特点 Chapter 2 Product Features

北奕高频液压打桩锤是专门搭配挖掘机使用,操作灵活,有效利用了挖掘机的液压动力,充分发挥了挖掘机的机动性,大幅节约成本,提高工作效率,使桩基工程施工迈向新阶段,让您的挖掘机实现一机多用,提高投资效益。特别适用于市政、桥梁、围堰、建筑地基等中短桩工程;打桩锤由、连接上架、旋转架、箱体架、箱体、夹头及其他可定制附件组成,偏心铁总成,采用液压马达驱动,产生高速旋转及垂直激振力,透过减振橡胶块后,维持一定的振幅,能够应付各种类型的土质与打桩要求。激振力是与偏心铁偏心力矩和转速的平方成正比,北奕打桩锤的偏心铁、齿轮经过详细计算与测试,能够兼顾强大的激振力和材料特性,不但能满足工作需要,同时保证了机械可靠性。

北奕高频液压打桩锤既可打桩也可拔桩,所打拔桩的长度取决于挖机臂伸出的高度,挖机臂伸到最高处时,拆掉挖斗以后的高度就是可以打拔桩的长度,35吨以上挖掘机可改装加长臂。

The Beiyi high-frequency hydraulic pile hammer is specifically designed to be used in conjunction with excavators, with flexible operation and effective utilization of the excavator's hydraulic power. It fully utilizes the excavator's mobility, significantly saves costs, improves work efficiency, and takes pile foundation construction to a new stage. It enables your excavator to achieve multiple uses and improves investment efficiency. Especially suitable for short pile projects such as municipal engineering, bridges, cofferdams, and building foundations; The pile hammer consists of an eccentric iron assembly, a connecting frame, a rotating frame, a box frame, a box body, a clamp head, and other customizable accessories. It is driven by a hydraulic motor to generate high-speed rotation and vertical excitation force. After passing through the vibration reducing rubber block, it maintains a certain amplitude and can cope with various types of soil and pile driving requirements. The excitation force is proportional to the square of the eccentric moment and speed of the eccentric iron. After detailed calculation and testing, the eccentric iron and gear of the Beiyi pile hammer can balance strong excitation force and material characteristics, not only meeting the work needs but also ensuring mechanical reliability.

The Beiyi high-frequency hydraulic pile hammer can both drive and pull out piles. The length of the pile to be pulled out depends on the height of the excavator arm. When the excavator arm extends to the highest point, the height after removing the bucket is the length that can be pulled out. Excavators weighing over 35 tons can be modified with an extended arm.

第三章 参数 Chapter 3 Parameters

Module	Unit	BY-SG250	BY-SG330
Vibration Frequency	Lpm	2800	2800
Eccentricity Moment Torque	nm	40	50
Exciting Force	T	36	45
Mian Machine Weight	Kg	2600	3100
Operating Pressure of Hydraulic System	Bar	280	320
Flow Demand of Hydraulic System	Lpm	220	250
Operating Pressure of Hydraulic System	T	18-25	35-45

第四章 总体说明 Chapter 4 General Description

1. 打桩锤的使用

打桩锤的特殊设计能适用于多种桩基工程施工现场。

1. Use of pile hammer

The special design of pile hammer can be applied to various pile foundation construction sites.

2. 工作服装

机器操作时,若您的穿着不适宜,则会造成人员受伤。建议您穿辛着适宜的工作服。例如:安全帽,安全鞋,防护眼镜,专业外衣,耳保护,专业手套等。工作时请不要佩戴领带或围巾,或长发工作。

2. Work attire

If your clothing is not suitable during machine operation, it may cause personal injury. I suggest you wear suitable work clothes. For example: safety helmet, safety shoes, protective goggles, professional outerwear, ear protection, professional gloves, etc. Please do not wear ties or scarves, or long hair while working.

3. 起重设备

错误的操作起重设备易使人员受伤。请熟练掌握起重设备的操作并确保设备的起重量在适宜的范围内。进行起重前,请确保设备状况良好,并按照相关的操作说明进行正确无误的操作。

3. Lifting equipment

Incorrect operation of lifting equipment can easily cause injury to personnel. Please master the operation of lifting equipment proficiently and ensure that the lifting capacity of the equipment is within the appropriate range. Before lifting, please ensure that the equipment is in good condition and follow the relevant operating instructions for correct and error free operation.

4. 安全

本手册是您进行安全操作和维护机器的指南。在安装、操作或维修机器前,请您仔细阅读本手册,并将手册与机器放置在一起。

4. Safety

This manual is your guide for safe operation and maintenance of the machine. Before installing, operating, or repairing the machine, please carefully read this manual and place it together with the machine.

5. 适用操作

若您未进行机器的试用并不娴熟的操作机器,则易造成人员的伤亡。请在宽敞清洁的场所进行试用操作,并保持其他不相关人员远离操作现场。

5. Applicable operations

If you have not tried the machine and are not proficient in operating it, it is easy to cause personal injury or death. Please conduct the trial operation in a spacious and clean area, and keep other unrelated personnel away from the operation site.

6. 安全障碍

在公共场所,或当您的能见度降低时,请让闲杂人员远离障碍区。

6. Safety barriers

In public places or when your visibility decreases, please keep idle personnel away from the obstacle area.

7. 机器使用状态

请适度操作机器。若超出限度,则会损坏机器并且会有危险事故。请不要随意将打桩机进行改造。错误的改造很容易造成危险事故。不要操作丢失零部件的机器。不要在高温下进行操作。

7. Machine usage status

Please operate the machine moderately. If the limit is exceeded, it will damage the machine and there may be dangerous accidents. Please do not modify the pile driver arbitrarily. Incorrect modifications can easily lead to dangerous accidents. Do not operate machines with missing parts. Do not operate at high temperatures.

8. 维修

请不要擅自维修机器。当需要更换零部件时,请联系北奕机械。该产品适用于大型重型挖掘机和建设工作。施工现场具有危险性,因此请警惕由于不正当使用而引起的危险,严重伤害甚至死亡事故。若您对产品有任何疑问,请联系咨询北奕售后部。

8. Maintenance

Please do not repair the machine without authorization. When parts need to be replaced, please contact Beiyi Machinery. This product is suitable for large heavy-duty excavators and construction work. The construction site is dangerous, so please be alert to the dangers caused by improper use, serious injuries or even fatal accidents. If you have any questions about the product, please contact the after-sales department of Beiyi for consultation.

第五章 安全预防措施 Chapter 5 Safety Precautions

1. 操作人员须经专业练习,了解所操作的打桩锤的构造、原理、操作和维护保养方法。并持有操作证,方可操作。

1. Operators must undergo professional practice to understand the structure, principles, operation, and maintenance methods of the pile hammer they are operating. Only with an operating certificate can one operate.

2. 打桩锤的故障不能擅自进行处理,应与售后人员及时联系。

2. The malfunction of the pile hammer cannot be handled without authorization, and should be promptly contacted with after-sales personnel.

3. 打桩锤的试车、安装、拆卸、拖运等应严格执行相关规定。

3. The testing, installation, dismantling, and towing of pile hammers should strictly comply with relevant regulations.

4. 遇雷、雨、雪、雾和六级以上风等恶劣气候时,应停止作业,风速超过七级或有强台风警报时,应将打桩机迎风向停置,必要时,应将附臂放倒,人员必须远离打桩机。

When encountering severe weather conditions such as lightning, rain, snow, fog, and winds above level 6, work should be stopped. When the wind speed exceeds level 7 or there is a strong typhoon warning, the pile driver should be stopped facing the wind. If necessary, the attached arm should be lowered, and personnel must stay away from the pile driver.

5. 作业前首先空运转,待确定各部件状态正常后方可作业。

5. Before starting the task, it should be air freighted first, and the task can only be carried out after confirming that all components are in normal condition.

6. 使用夹头夹桩时,应先夹紧桩后再作业,作业时不得松开夹头,停止作业时,必须先停止振动后再松开夹头。

When using a clamp to clamp a pile, the pile should be clamped first before operation. The clamp should not be loosened during operation. When stopping the operation, the vibration must be stopped first before releasing the clamp.

7. 打桩锤工作时,要有专人指挥。指挥人员与操作人员在工作前要相互核对信号,工作中应密切配合。

7. When the pile hammer is working, there should be a dedicated person to command. Commanders and operators should check signals with each other before work and closely cooperate during work.

8. 打桩锤回转制动应缓慢,同向连续运转应小于270°。

8. The rotation brake of the pile hammer should be slow, and the continuous operation in the same direction should be less than 270°.

9. 操作人员不能擅自离开岗位。

9. Operators are not allowed to leave their posts without authorization.

10.出现下列情况应立即停机检修打桩锤主体及附臂有零件脱落。打桩锤马达紧固螺栓松动,回转装置松动,箱体内有冲击声,轴承、齿轮温升过高,各部分连接螺栓松动。

10. If any of the following situations occur, the main body and attached arm of the pile hammer should be stopped immediately for maintenance. The fastening bolts of the pile hammer motor are loose, the rotating device is loose, there is an impact sound inside the box, the temperature rise of the bearings and gears is too high, and the connecting bolts of various parts are loose.

11.如减震块振幅长时间过大,应停机查明原因。

If the amplitude of the shock absorber block is too large for a long time, the machine should be stopped to investigate the cause.

12.打桩时应及时校正桩的垂直度。桩入土20%以上后,严禁采用移动打桩锤或回转等动作来校正桩的垂直度。

During pile driving, the verticality of the pile should be corrected in a timely manner. After the pile has penetrated more than 20% of the soil, it is strictly prohibited to use movements such as moving the pile hammer or turning to correct the verticality of the pile.

13.每天作业停止时,应将桩管沉入土中以下,或将打桩锤放到地面,切断打桩机的动力,使全部制动生效,长期停机时,应将打桩锤放在坚实平整的地面上,并采取防雨措施。

13. When the homework stops every day, the pile pipe should be sunk into the soil or the pile hammer should be placed on the ground to cut off the power of the pile driver and make all brakes effective. When the machine is stopped for a long time, the pile hammer should be placed on a solid and flat ground and rainproof measures should be taken.

14.拆卸油管时,应保证管接头不受污染。

14. When disassembling the oil pipe, ensure that the pipe joint is not contaminated.

15.操作人员在操作时,必须精力集中。不得与无关人员说、笑、打、闹,操作中不准吸烟及吃食物。

15. Operators must concentrate their energy during operation. Do not talk, laugh, fight, or make noise with unrelated personnel, and do not smoke or eat food during operation.

16.严格遵守打桩机的有关保养规定,认真的做好各级保养,确保打桩机经常处于良好状态。并注意合理使用,正确操作。

16. Strictly abide by the relevant maintenance regulations of pile drivers, conscientiously carry out maintenance at all levels, and ensure that pile drivers are in good condition regularly. And pay attention to reasonable use and correct operation.

17.打桩机在工作前,应向施工人员了解施工条件和任务、及施工中发现的问题与本班应注意的事项。

17. Before starting work, the pile driver should inquire with the construction personnel about the construction conditions and tasks, as well as the problems discovered during construction and the precautions that should be taken by the team.

18.发动锤启动后应低速预温,预热最低十分钟后,检查发动机运转是否正常,检查打桩机各部分是否有漏油情况,禁止发动机在预温时猛轰油门。挖掘机预热完成后,慢慢伸展小臂,确保管路无挤压处,请先启用较小的打桩力。

18. After starting the hammer, it should be preheated at low speed for at least ten minutes. Then, check whether the engine is running normally and whether there is any oil leakage in various parts of the pile driver. It is forbidden to forcefully press the accelerator during preheating. After the excavator is preheated, slowly extend the forearm to ensure that there are no squeezed areas in the pipeline. Please use a smaller pile driving force first. The matter.

19.打桩锤操作中,各项动作要"稳、准、绝对禁止"猛、急、快"否则会造成部件的损坏或造成危险和事故。

19. During the operation of the pile hammer, all movements must be "stable, accurate, and absolutely prohibited" with force, urgency, and speed, otherwise it may cause damage to the components or cause danger and accidents.

20.夜间工作时应有足够的照明严禁无照明操作。

20. Sufficient lighting should be provided during night work, and operations without lighting are strictly prohibited.

21.在装配拆卸作业前必须对所有使用的工具、吊钩、钢丝绳等作仔细的检查 确定无缺陷后方可使用。为防止无关人员进入组装拆卸现场,应设置醒目的标牌或围栏。

21. Before assembly and disassembly operations, all tools, hooks, wire ropes, etc. used must be carefully inspected to ensure that there are no defects before use. To prevent unrelated personnel from entering the assembly and disassembly site, conspicuous signs or fences should be set up.

22.必须佩戴防噪音耳罩,以及当心吊物。

22. It is necessary to wear noise proof earmuffs and be careful of lifting objects.

23.打桩锤打拔桩时,注意绳索保护,准备工作时,应发出信号,通知周围人员离开。桩下沉时,以所打桩的高度为半径范围内(如右图所示),严禁站人,如果因此原因发生的伤人伤车事故,厂家均不负责。

23. When using a pile driving hammer to pull out piles, pay attention to rope protection. When preparing for work, a signal should be issued to notify surrounding personnel to leave. When the pile sinks, it is strictly prohibited to stand within a radius of the height of the pile being driven (as shown in the figure on the right). The manufacturer is not responsible for any injuries or vehicle accidents caused by this reason.

24.夹齿要做到定时检查及更换,齿形板磨损后,会引起夹头夹桩时的摩擦力变小,导致脱桩,如果因此原因发生的伤人伤车事故,厂家均不负责。当小于4mm时请更换齿条或齿板。

24. The clamping teeth should be checked and replaced regularly. After the tooth shaped plate wears out, it will cause the friction force of the clamping head to decrease, resulting in detachment of the pile. If any injury or vehicle accident occurs due to this reason, the manufacturer will not be responsible. Please replace the rack or gear plate when it is less than 4mm.

25.打桩锤每日次使用前应晃动箱体几次,以便齿轮油进入轴承内,延长轴承使用寿命。

25. The pile hammer should be shaken several times before daily use to allow gear oil to enter the bearing and extend its service life.

26.打拔桩时辅臂与锤之间的钢丝绳始终连接,不得取下。定期检查钢丝绳是否有磨损,发现磨损立马更换。如果由于不挂钢丝绳发生的伤人伤车事故,厂家均不负责。

26. When pulling out the pile, the steel wire rope between the auxiliary arm and the hammer should always be connected and not removed. Regularly inspect the steel wire rope for wear and replace it immediately if any wear is found. The manufacturer is not responsible for any injury or vehicle accident caused by not hanging the steel wire rope.

27.打拔桩时钢板桩应用铁链缠绕一圈,以免拖夹时造成人机伤害。因不挂铁链拖夹发生的伤人伤车事故,厂家均不负责。

27. When driving or pulling piles, the steel sheet piles should be wrapped with iron chains to avoid human and machine injuries when towing the clamp. The manufacturer is not responsible for any injuries or vehicle damage caused by not hanging iron chains towing the clamp.

第六章 注意事项 Chapter 6 Precautions

只有在充分了解下述安全说明,才能使用设备。操作者应该了解操作指令,设备手册及工作程序和规定。开始操作之前,确保熟知设备的安装、检查、操作。

The equipment can only be used after fully understanding the following safety instructions. The operator should understand the operating instructions, equipment manuals, work procedures and regulations. Before starting operation, make sure you are familiar with the installation, inspection and operation of the equipment.

1.在使用设备时,一定要小心,以避免作业中的碎片,松散的废料或飞行物迸溅使人受伤。操作人员应穿戴防护装备,然后再开始工作。

1. When using the equipment, be careful to avoid injuries from debris, loose waste or flying objects during operation. Operators should wear protective equipment before starting work.

2.在操作过程中,拆卸和组装,碎废钢或引脚可能迸溅,伤害周围的人,因此,必须做好预防措施保持工作人员适当的远离施工现场。

2. During the operation, disassembly and assembly, broken scrap steel or pins may splash and injure people around. Therefore, preventive measures must be taken to keep workers away from the construction site appropriately.

3.在装有设备的挖掘机上就座前,为安全起见,操作人员应该检查周围,并固定设备的位置。驾驶室的隔间应用加固的防护罩以保护操作员,其应充分理解该附件的类型和形状。

3. Before sitting on the excavator with the equipment, the operator should check the surroundings and fix the position of the equipment for safety. The compartment of the cab should be reinforced with a protective cover to protect the operator, who should fully understand the type and shape of the attachment.

4.相应位置上没有按说明书上贴标签的设备,可能不是原厂的正品设备,不应该用于工作。每个标签要粘贴在正确位置,并应定期进行检查,以确保内容可读。当标签严重损坏且无法读取时,应该立即更换新的。授权经销商和销售商处可提供标签。

4. Equipment that is not labeled in the corresponding position as specified in the manual may not be genuine equipment from the original manufacturer and should not be used for work. Each label should be affixed in the correct position and should be checked regularly to ensure that the content is readable. When a label is severely damaged and cannot be read, it should be replaced immediately with a new one. Labels are available from authorized dealers and distributors.

5.使用该设备时,应该保护操作者的眼睛,耳朵和呼吸器官。操作者应穿合身的工作服,否则可能会因不便引起事故伤害操作者。

5. When using the equipment, the operator's eyes, ears and respiratory organs should be protected. The operator should wear suitable work clothes, otherwise the operator may be injured due to accidents caused by inconvenience.

6.一旦设备开始工作,将会产生热量,设备会变热。请等待长时间待它冷却后方可触摸。

6. Once the device starts working, it will generate heat and the device will become hot. Please wait for a long time for it to cool down before touching it.

7.每个台班进行打拔桩作业前,利用挖机大小臂晃动振动锤数>次,保证每个轴承充分润滑。

7. Before each shift starts pile driving and pulling operations, use the excavator's large and small arms to shake the vibrating hammer several times to ensure that each bearing is fully lubricated.

8.全新打桩锤首次使用4小时,必须更换箱体齿轮油,继续工作20小时第二次更换箱体齿轮油,继续工作50小时后第三次更换箱体齿轮油,以后每隔200小时更换箱体齿轮油,这样会最大限度延长振动锤的使用寿命。

8. The gear oil of a brand new pile hammer must be replaced after 4 hours of use for the first time. After 20 hours of continuous work, the gear oil should be replaced for the second time. After 50 hours of continuous work, the gear oil should be replaced for the third time. After that, the gear oil should be replaced every 200 hours. This will extend the service life of the vibratory hammer to the maximum extent.

9.打桩锤二级振动禁止长时间使用,遇到恶劣工况时短时间使用,否则会造成箱体发热,损坏轴承。

9. The second-level vibration of the pile hammer is prohibited to be used for a long time. It should be used for a short time under severe working conditions, otherwise it will cause the box to heat up and damage the bearings.





当运送设备时,请一定附上本手册。

When shipping the device, be sure to include this manual.

第七章 安全信息 Chapter 7 Security Information

工作现场造成事故的原因,大多数是由于没有全面了解基本的操作方法以及没有充分做好维修保养服务。事故大多发生于用户认为可能是危险的地方。因此,在操作设备前,应该进行必要的检查和维护。操作员应该有足够的操作设备的经验,为了操作该设备,应充分了解手册中的指示。如果仍然不熟悉本手册,请咨询其他专家学习操作,维修和检查。检查,维修和操作之前,请阅读并完全理解本手册和其中的安全信息。为了更好的理解本手册和设备安全的警告牌,特把安全等级及含义等相关信息在下面列出,要求用户充分了解其内容及其含义。

Most accidents at work are caused by not fully understanding the basic operation methods and not doing adequate maintenance services. Most accidents occur in places that users think may be dangerous. Therefore, before operating the equipment, necessary inspections and maintenance should be carried out. The operator should have sufficient experience in operating the equipment and fully understand the instructions in the manual in order to operate the equipment. If you are still not familiar with this manual, please consult other experts to learn operation, maintenance and inspection. Please read and fully understand this manual and the safety information therein before inspection, maintenance and operation. In order to better understand this manual and the warning signs for equipment safety, the relevant information such as safety levels and meanings are listed below, and users are required to fully understand their contents and meanings.

 危险	表示一个紧迫的危险,如果不能避免的话,可能会导致死亡或严重伤害。然而这个标志只有在极其危险的情况下发出。(表示引起死亡或严重伤害的危险) Indicates an imminent danger which, if not avoided, could result in death or serious injury. However, this sign is only issued in extremely dangerous situations. (Indicates a danger that could result in death or serious injury)
 警告	表示危险,如果不加以避免,是极有可能导致死亡或严重伤害的。(表明可能引起死亡或严重伤害的危险) Indicates a hazard which, if not avoided, could result in death or serious injury. (Indicates a hazard which could result in death or serious injury)
 小心	说明可能会导致轻至中度伤害的危险。(表明有轻到中的危险) Indicates a hazard that could result in minor to moderate injury. (Indicates a minor to moderate hazard)
 注意	表示需要注意的个人安全和财产保护的直接或间接的状态。(表明公司的法规或人身安全规则) Indicates a direct or indirect state that requires attention to personal safety and property protection. (Indicates company regulations or personal safety rules)

手册以及每一个标签、警告牌,都对安全非常重要,因此,应经常保持清洁可辨认,损坏时也应更换新的。为了避免和防止危险,请遵守安全指示。

本公司并不能提前假设所有危险工况,本手册中的任何规则或警告牌,不包括与安全有关的每一种情况。这些操作、检查或维修服务中并不能涵盖所有的安全指令,为了安全起见,用户应根据各自的工况采取必要的安全措施。本公司不可能预测到所有可能在操作,装配或维修服务等各种工况中出现的危险。因此,本手册不涉及任何特定的警告以及安全有关的每一种情况。对于本手册中没有描述到的操作,装配或维修服务情况下出现的危险,用户应采取必要的安全防护措施。

The manual and every label and warning sign are very important for safety. Therefore, they should be kept clean and readable at all times, and should be replaced with new ones when damaged. To avoid and prevent danger, please follow the safety instructions.

The company cannot assume all dangerous working conditions in advance. Any rules or warning signs in this manual do not include every situation related to safety. These operations, inspections or maintenance services cannot cover all safety instructions. For safety reasons, users should take necessary safety measures according to their respective working conditions. It is impossible for the company to predict all the dangers that may occur in various working conditions such as operation, assembly or maintenance services. Therefore, this manual does not involve any specific warnings and every situation related to safety. For dangers that occur in operation, assembly or maintenance services that are not described in this manual, users should take necessary safety precautions.

第八章 维护 Chapter 8 Maintenance

(1)工作500小时后请对打桩机整体进行检查。

(1) Please check the pile driver as a whole after 500 hours of operation.

(2)螺丝扭矩

(2) Screw torque

规格 Specification	扭矩 Torque	规格 Specification	扭矩 Torque
M10	44Nm	M20	350Nm
M12	77Nm	M30	1404Nm
M16	190Nm		

*所有重要部位紧固件高强度等级为12.9.

*The high strength grade of fasteners in all important parts is 12.9.

(3)螺母

所有重要部位内六角螺母的高强度等级为10。

每使用4小时后,请再次确保每个零部件不要松弛,定期检查是保证发挥最好性能的重要措施。

(3) Nuts

The high strength grade of all important hexagon nuts is 10.

After every 4 hours of use, please make sure that each component is not loose. Regular inspection is an important measure to ensure the best performance.

(4)轴承

所有轴承均为经过详细计算与测试的特殊轴承,更换轴承时,请使用原厂的零配件。

(4) Bearings

All bearings are special bearings that have been carefully calculated and tested. When replacing bearings, please use original spare parts.

(5)齿轮润滑

齿轮润滑请使用GL-585W-140型号齿轮油,严禁擅自更换其它型号。

(5) Gear lubrication

For gear lubrication, please use GL-585W-140 gear oil. It is strictly forbidden to replace it with other types without authorization.

机型 Model	D250	D330	D350	D450
加油量L Refueling volume L	8	12	14	15

第九章 质保 Chapter 9 Warranty

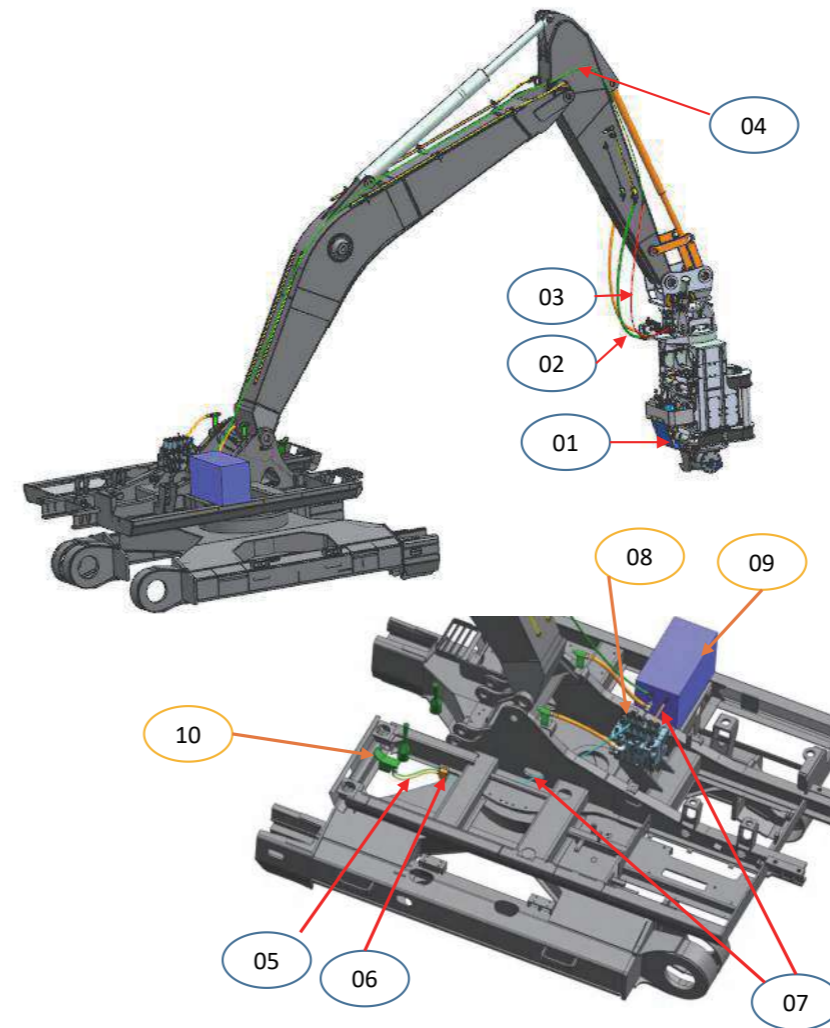
打桩锤质保书 Pile hammer warranty

配件名称 Part name	质量保证期限 Warranty period	以下情况不在质保范围 The following situations are not covered by the warranty:
液压马达 Hydraulic motor	6个月 6 months	液压油内有异物,超过油封更换时间,定期保养不良,过渡调高溢流压力引起的破损,均不在索赔范围。 The damage caused by foreign matter in the hydraulic oil, exceeding the oil seal replacement time, poor regular maintenance, and excessive increase in overflow pressure are not within the scope of compensation.
轴承 Bearings	3个月 3 months	不按规定添加润滑油导致磨损加快,过度使用引起的破损及磨损,均不在索赔范围。 Accelerated wear due to failure to add lubricating oil as required, and damage and wear caused by excessive use are not within the scope of claims.
溢流阀 Relief valve	6个月 6 months	液压油内有异物造成的破损,定期保养不良,外部冲击,过度调高溢流压力引起的破损,均不在索赔范围。 Damage caused by foreign matter in the hydraulic oil, poor regular maintenance, external impact, and damage caused by excessive increase in overflow pressure are not within the scope of compensation.
单向阀 Check valve	6个月 6 months	液压油内有异物,超过油封更换时间,定期保养不良,使用者的错误,外部冲击,一个月后发生的发卡,均不在索赔范围。 Foreign matter in the hydraulic oil, exceeding the oil seal replacement time, poor regular maintenance, user error, external impact, and jamming that occurs after one month are not covered by the claim.
偏心铁总成 Eccentric iron assembly	3个月 3 months	外部冲击及过度使用引起的破损及磨损,因空打过多断裂,均不在索赔范围。 Damage and wear caused by external impact and excessive use, as well as breakage due to excessive hitting, are not covered by the claim.
齿轮 Gear	6个月 6 months	外部冲击及过度使用引起的破损及磨损,不按规定添加适当的齿轮油,导致磨损加快,均不在索赔范围。 Damage and wear caused by external impact and excessive use, as well as accelerated wear caused by failure to add appropriate gear oil as required, are not covered by the claim.
组装管路 Assemble pipeline	3个月 3 months	擅自更改管路,保养不当,经外力碰撞,过度调高溢流阀的压力引起的破损,均不在索赔范围。 The damage caused by unauthorized modification of pipelines, improper maintenance, collision with external forces, and excessive increase of the pressure of the relief valve are not within the scope of compensation.
齿板 Tooth plate	不保修 No warranty	齿形板采用高强度、高韧性的锻打材质,使用寿命与操作者的使用量有很大关系,因此不存在保修保养。 The toothed plate is made of high-strength and high-toughness forged material. Its service life is closely related to the operator's usage, so there is no warranty maintenance.
减震块 Shock absorbing block	不保修 No warranty	我们已安装高质量的减震块,减震块的寿命跟机器操作有很大关系,因此不存在保修保养。 We have installed high-quality shock absorbers. The life of the shock absorbers is closely related to the operation of the machine, so there is no warranty maintenance.
螺丝螺帽 Screws and nuts	不保修 No warranty	我们已安装高强度的螺丝螺帽,操作者没有按时拧紧螺帽而导致丢失、崩掉、断裂,因此不存在保修保养。 We have installed high-strength screws and nuts. The operator did not tighten the nuts on time, resulting in loss, collapse, and breakage, so there is no warranty maintenance.
<p>*注:厂家仅对打桩锤质量问题本身负责,但不负责由于质量问题或其他原因而引发的误工,工伤等其他相关问题。 本须知最终解释权归厂家</p> <p>*Note: The manufacturer is only responsible for the quality of the pile hammer itself, but is not responsible for other related issues such as lost work time, work-related injuries, etc. caused by quality problems or other reasons. The final right of interpretation of this notice belongs to the manufacturer</p>		

第十章 阀块安装指导 Valve Block Installation Guide

注意:安装侧夹之前,挖掘机必须有破碎锤管路。

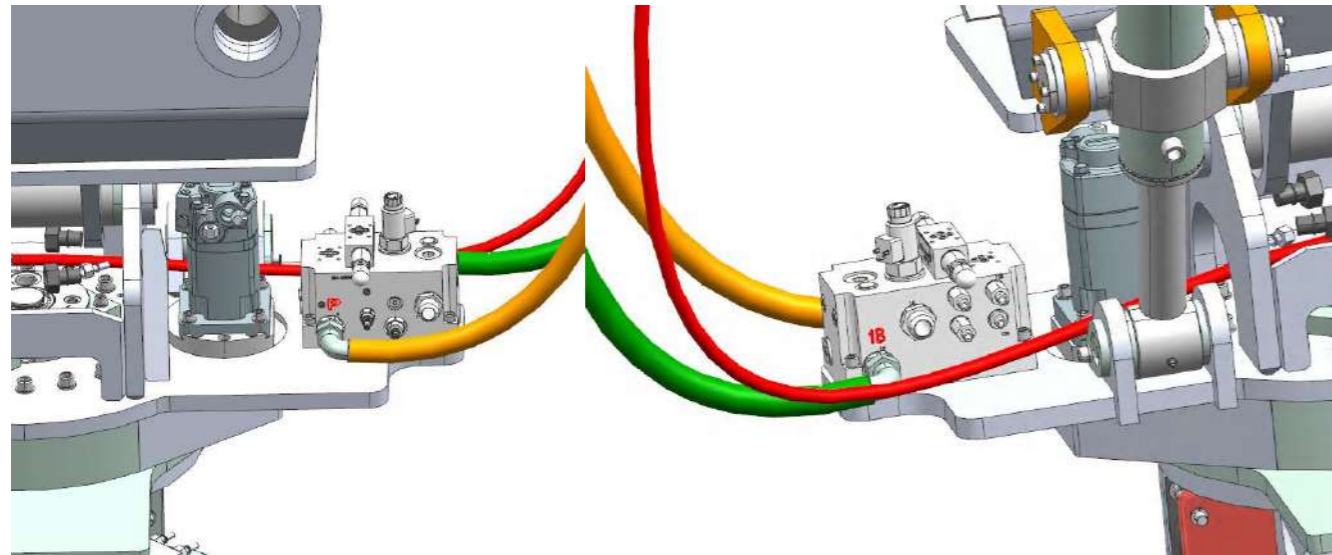
Note: The excavator must have a breaker pipeline before installing the side clamp.



Parts details table			
序号	名称	数量	备注
01	pile hammer	1	
02	hammerhead pipe	2	
03	Unloading oil pipe1	1	
04	Unloading oil pipe2	1	
05	Pilot tube1	2	
06	The electromagnetic valve	1	24V
07	Pilot tube2	2	
08	Excavator main valve		
09	Excavator hydraulic oil tank		
10	Travel foot valve		

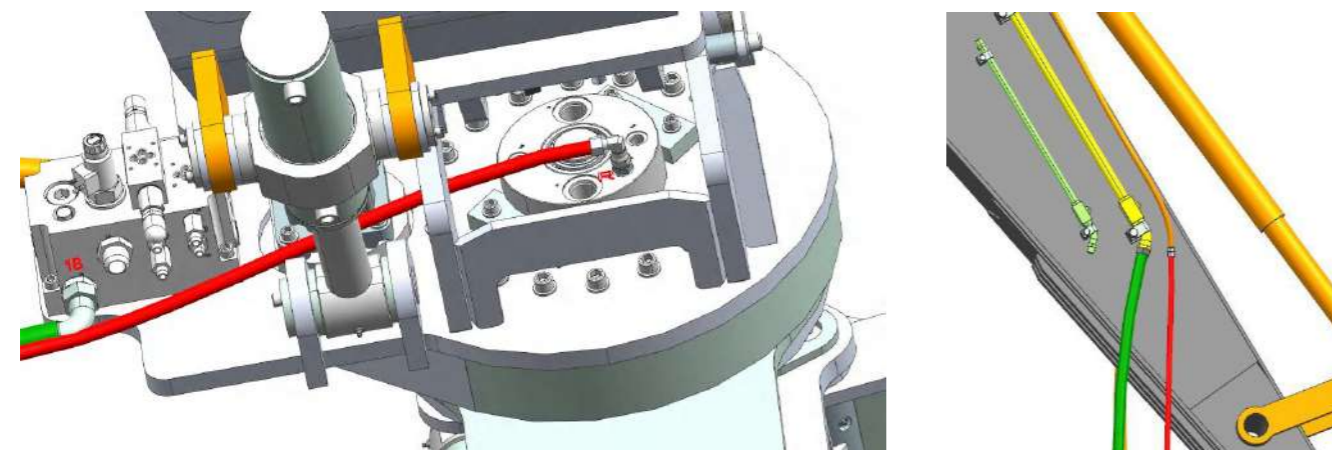
第一步:将两根锤管(Y03000245)的90°短弯头分别连接至控制阀块的P口和1B口,另一端连接至斗杆。

Step 1: Connect the short 90° elbows of the two hammer pipes (Y03000245) to the P port and 1B port of the control valve block respectively, and connect the other end to the bucket rod.



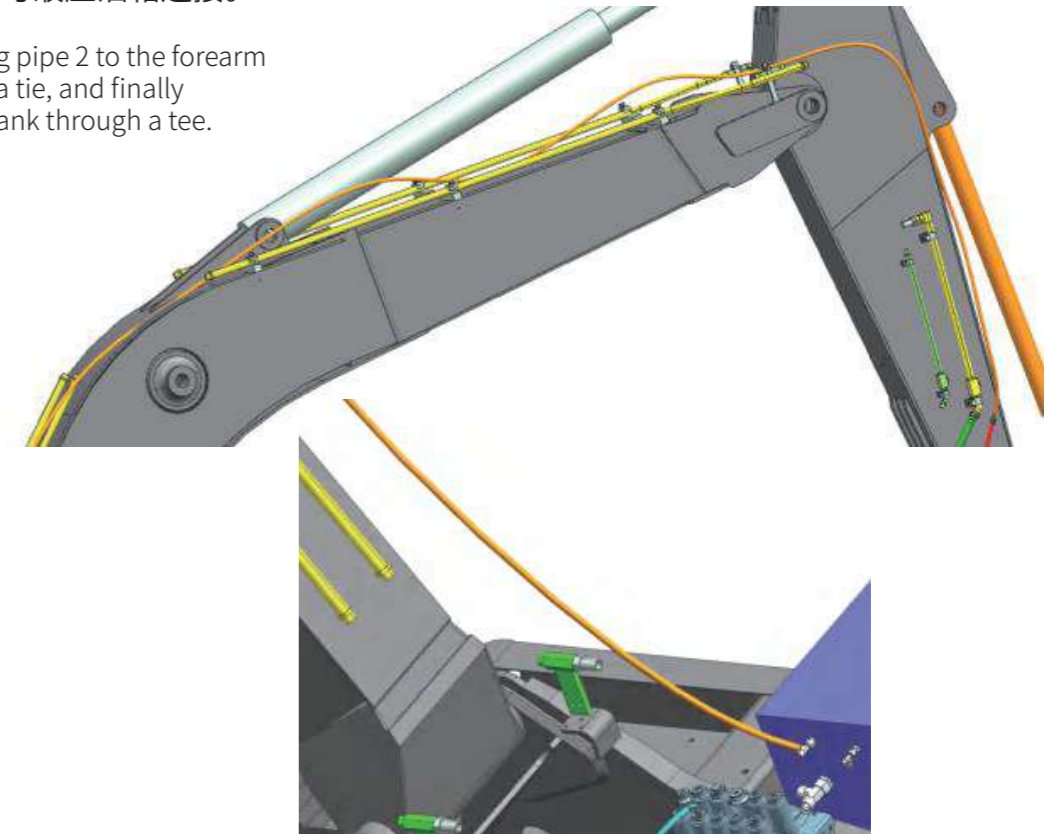
第二步:将第一根卸油管1(Y03000427)连接到分流器的R口,一端直接连接到卸油管2(Y03000426)(无走线)。

Step 2: Connect the first unloading pipe 1 (Y03000427) to the R port of the diverter, and connect one end directly to the unloading pipe 2 (Y03000426) (no alignment wire).



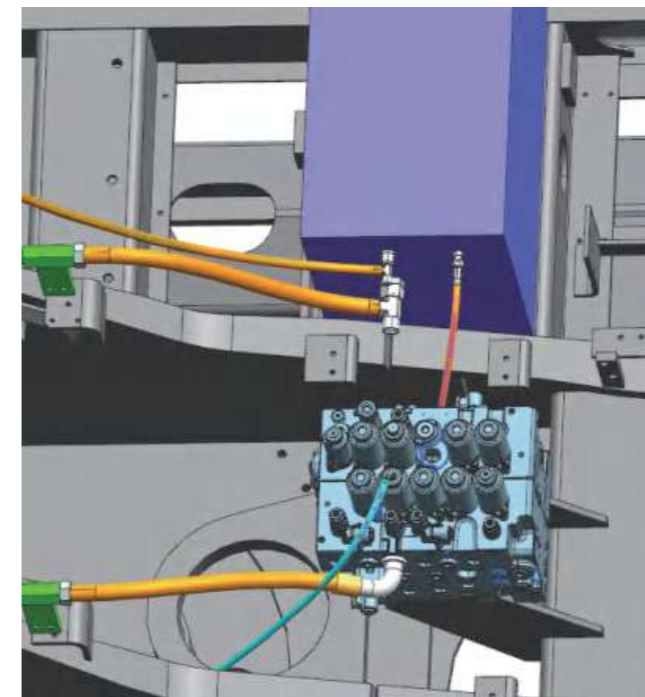
第三步:将卸油管2延伸至小臂处,用扎带固定在铁管上,最后通过三通与液压油箱连接。

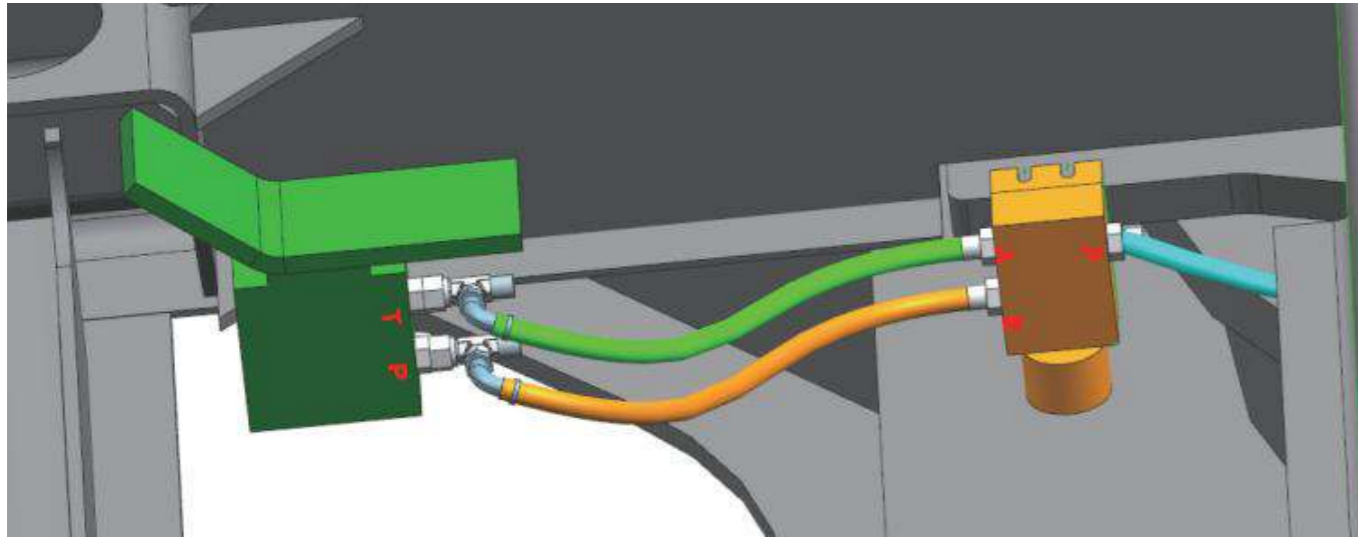
Step 3: Extend the oil unloading pipe 2 to the forearm and fix it on the iron pipe with a tie, and finally connect it to the hydraulic oil tank through a tee.



第四步:将破碎锤回油管通过三通直接连接至液压油箱。

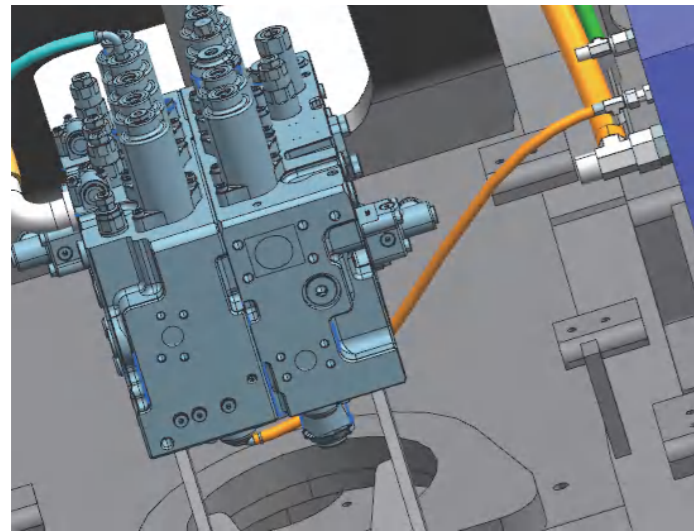
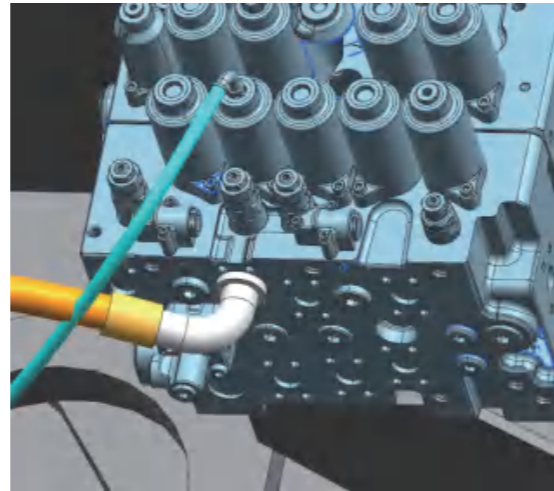
Step 4: Connect the breaker return pipe directly to the hydraulic oil tank through the tee.





第五步: 将电磁阀固定在驾驶室下方, 将三通连接到行走脚踏阀的T口和P口, 用先导管1 (Y03000239) 分别连接电磁阀的A口和B口。端口连接。电磁阀P口与挖掘机主阀先导口通过先导管2 (Y03000240) 连接。

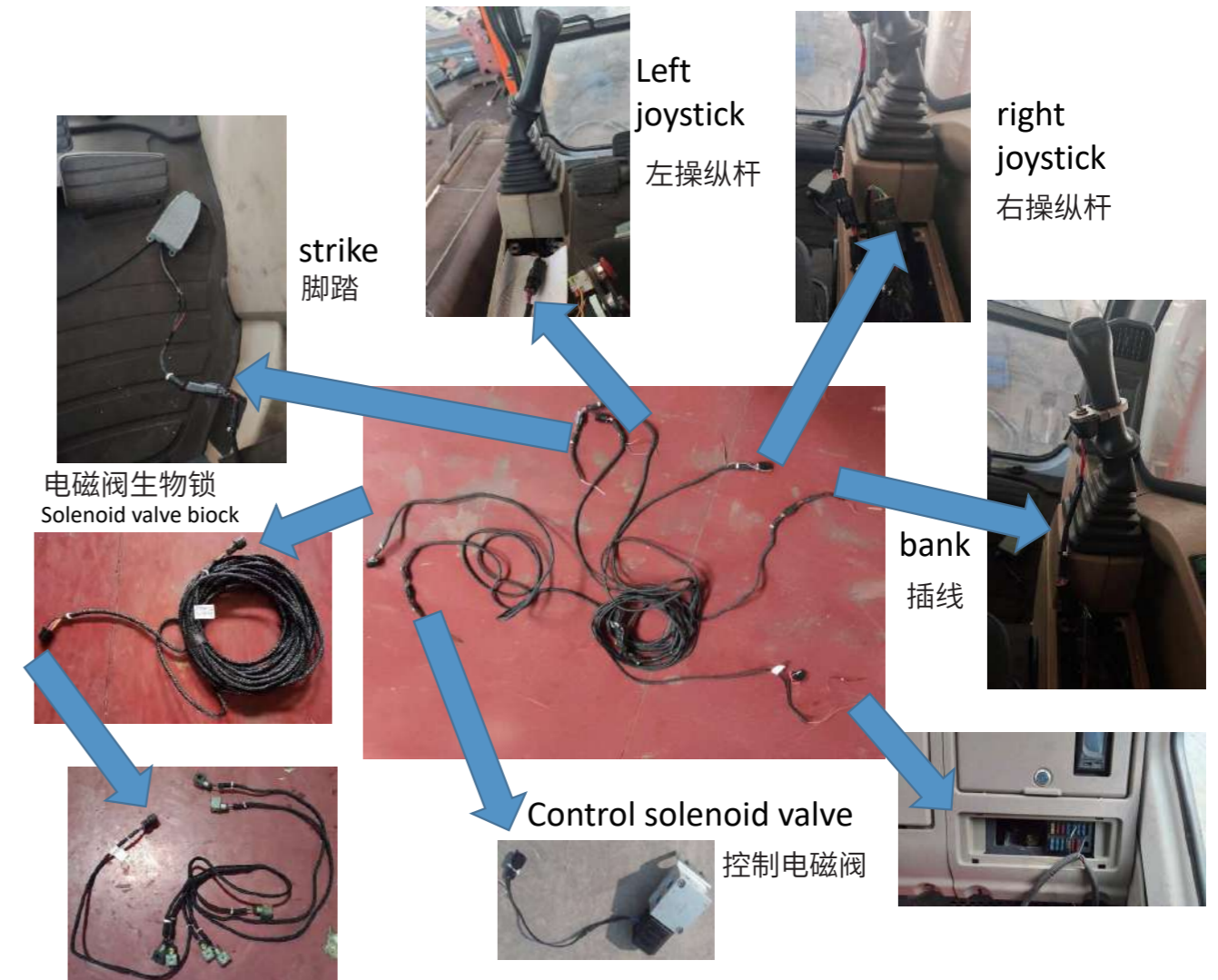
Step 5: Fix the solenoid valve under the cab, connect a tee to the T port and P port of the traveling foot valve, and use pilot tube 1 (Y03000239) to connect the A port and B port of the solenoid valve respectively. port connection. The P port of the solenoid valve and the pilot port of the excavator main valve are connected with a pilot tube 2 (Y03000240).



第六步: 使用先导管2 (Y03000240) 将挖掘机主阀先导器的另一端连接到液压油箱

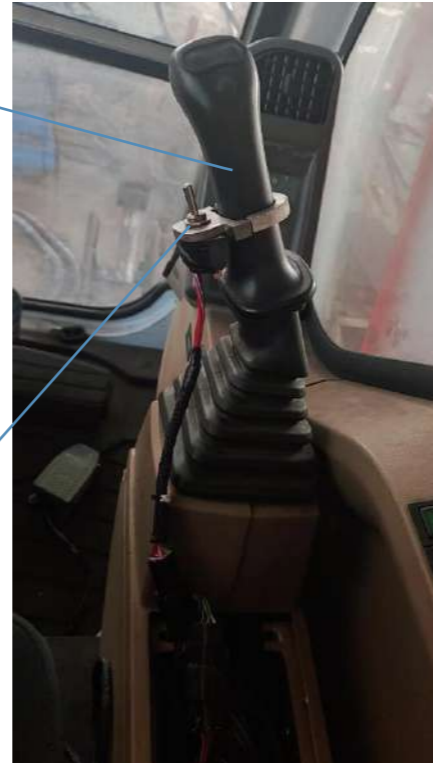
Step 6: Connect the other end of the excavator main valve pilot to the hydraulic oil tank using pilot tube 2 (Y03000240)

电路安装 Circuit installation





从原车上拆下把手, 换上附带的把手
Remove the handle from the original car and replace it with the included handle



将倾斜控制开关安装到手柄上
Attach tilt control switch to handle



左手柄上的两个按钮控制打桩机向左或向右旋转
The two buttons on the left handle control the pile driver to rotate left or right



找到驾驶室地板上的脚踏控制开关
Locate the strike control switch on the cab floor

右侧手柄上的两个按钮控制打桩机夹具的打开和关闭
Two buttons on the right handle control the opening and closing of the pile driver clamps

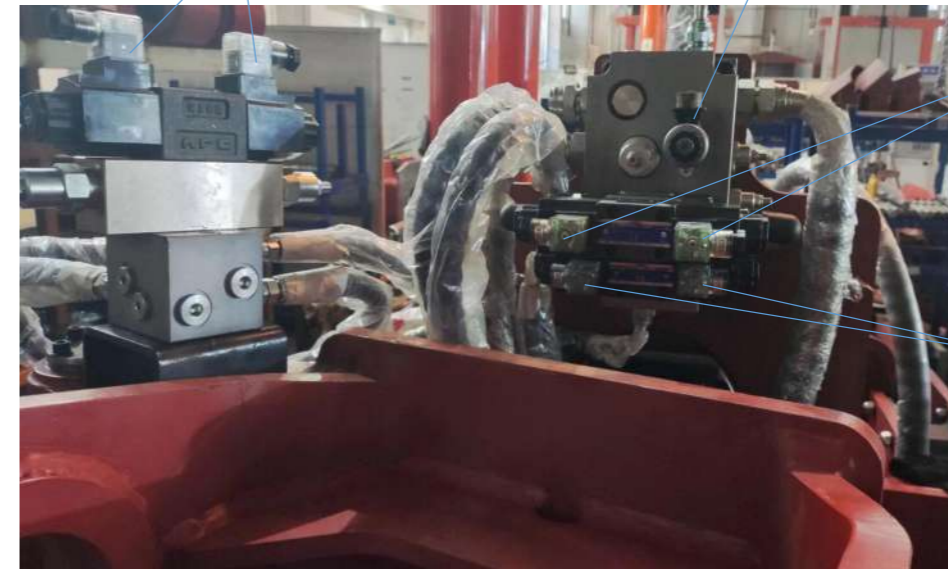


脚踏开关控制罢工和停止打桩机的
Foot switch controls the strike and stop of the pile driver



左右倾斜控制电磁阀
Left and right tilt control solenoid valve

打击控制电磁阀
blow control solenoid valve



左右旋转控制电磁阀
Left and right rotation control solenoid valve

夹嘴张合控制电磁阀
Gripper mouth opening and closing control solenoid valve

按钮开关控制左右打桩机右倾斜
Button switch controls the left and right tilt of the pile driver

