



HYDRAULIC CRANE
OPERATION AND
MAINTENANCE MANUAL
MODEL TR-400E

多田野液压起重机
TR-400E型 使用手册



INFORMATION No. : TR-400E-11/O-01C
资料编号:

APPLICABLE SERIAL No. : 540019~
适用的系列号:

01

株式会社 多田野

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

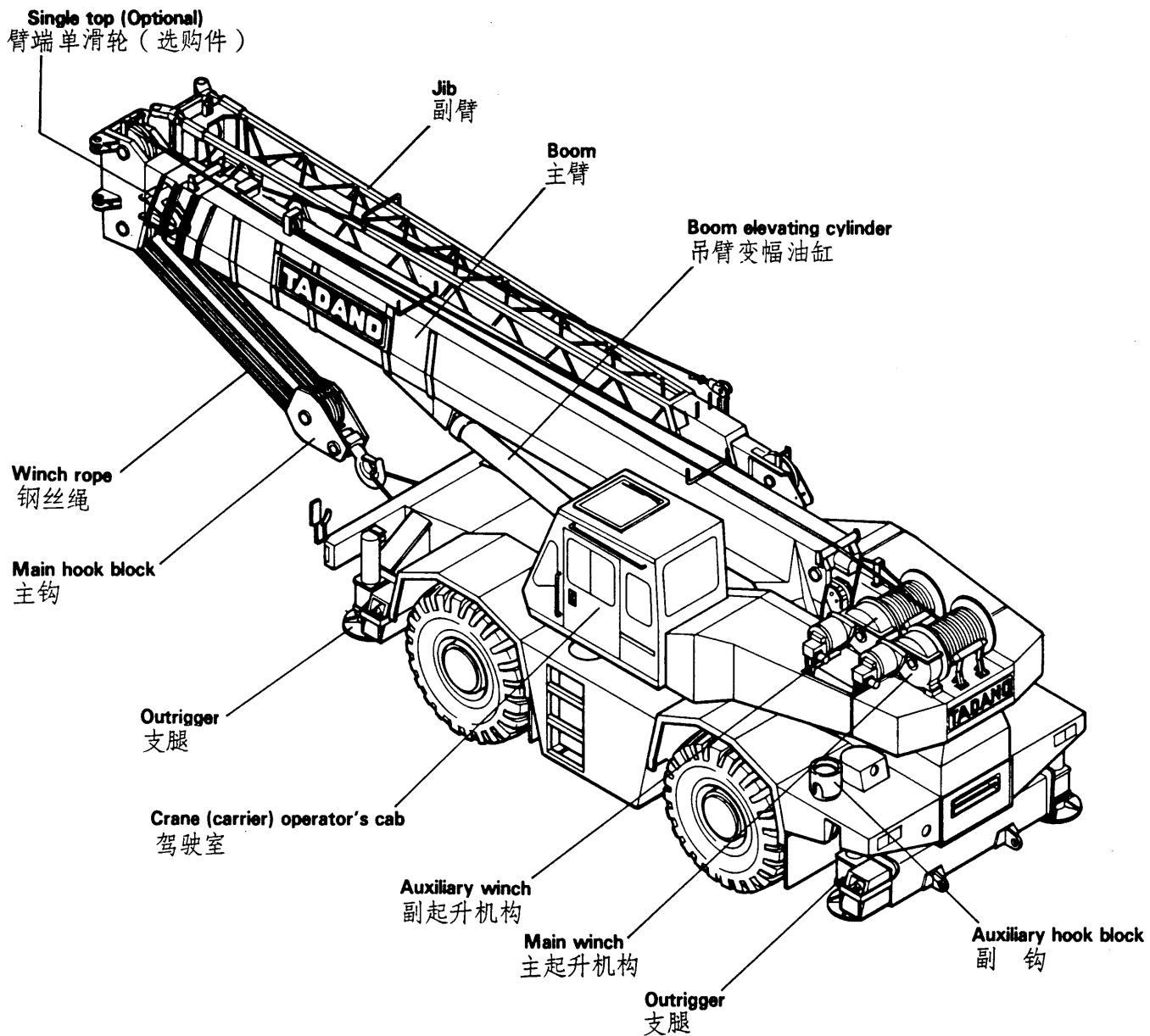
- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

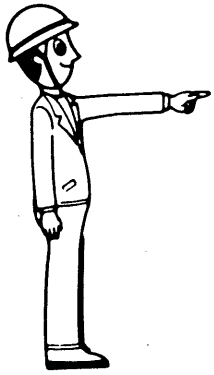
CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

DESCRIPTION OF COMPONENTS 各部分名称



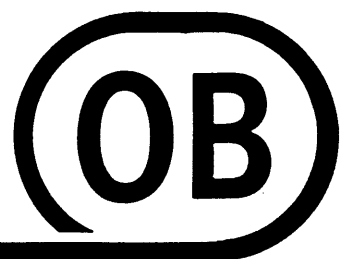
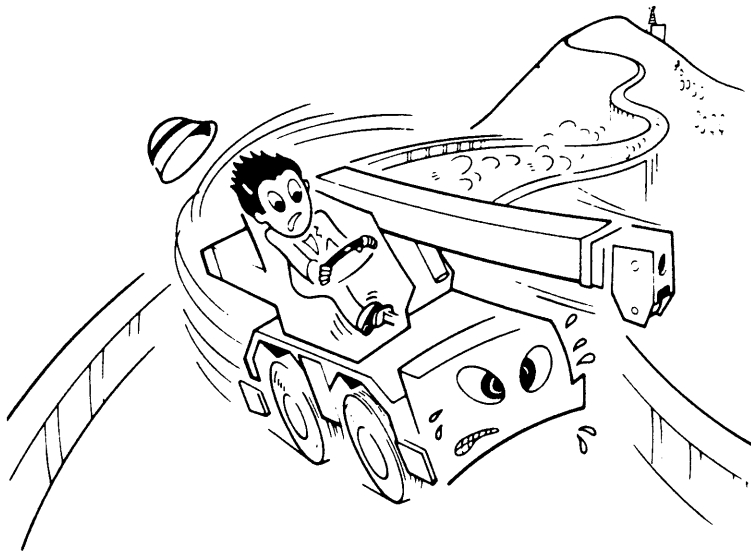
NOTE:
The above illustration may be different from the actual machine in minor details due to design improvement, etc.

注：
上图内容有可能因修改规格而与实际起重机不完全相符。



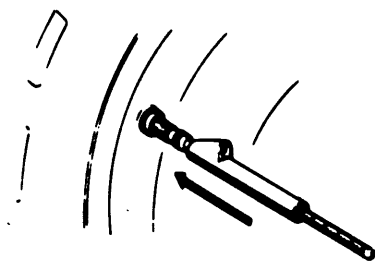
HOW TO OPERATE CARRIER

下车驾驶方法



4. Inflate the tire, while checking pressure with an air pressure gauge, until the specified pressure is attained.

4. 用气压表测量气压，当充气压力达到规定值时，转为下一个轮胎的充气作业。



WARNING:

Changing the pressure setting of the air pressure governor is strictly prohibited since it has great effects on the service brake performance.

注意:

不得变更气压调节器的调定压力值，否则会对下车制动系的性能带来极大影响，造成危险。

BRAKE OPERATION

□ FOOT BRAKE

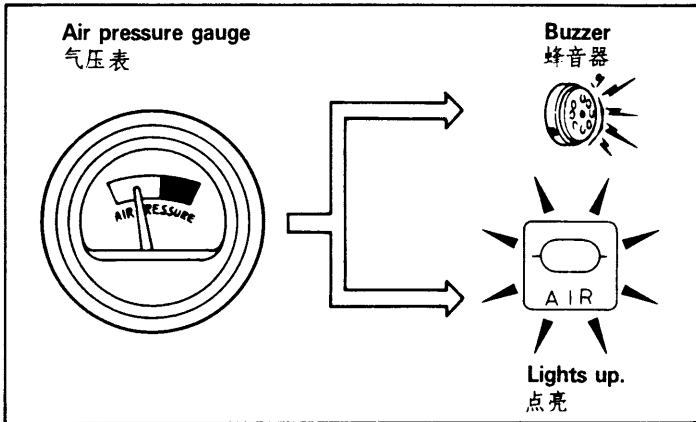
The foot brake is an air-over hydraulic brake.

■ AIR PRESSURE GAUGE

When the air pressure drops and the gauge indicates below the green range, the AIR pressure warning lamp lights, and the buzzer sounds.

When this happens, stop the vehicle immediately at a safe place, keep the engine running at idling speeds, and wait until the warning lamp goes out.

The buzzer stops sounding when the parking brake knob is pulled out.



If the AIR pressure warning lamp does not go out, carry the vehicle to the repair shop for repair and adjustment.

制动系操作

□ 主制动系

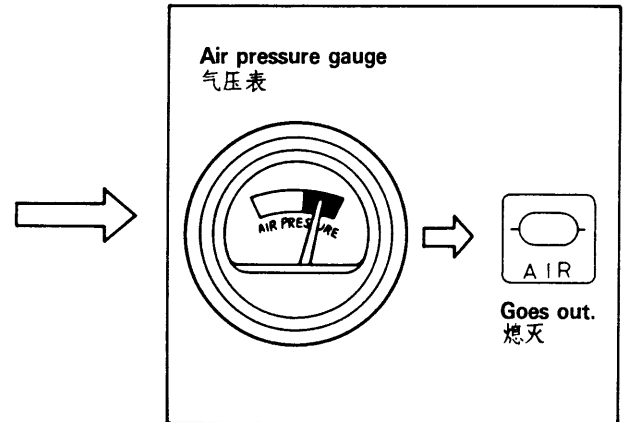
主制动系为气动液压制动系。

■ 气压表

若气压表指针降到刻度盘绿区以下时，气压报警灯就会点亮，蜂音器也会蜂鸣报警。

在上述情况下，应立即寻找安全的场所停车，使发动机以怠速继续旋转，等待气压报警灯熄灭。

这时，只要拉起停放制动器手柄，蜂音器就会停止蜂鸣。



若气压报警灯不熄灭时，应开到检修厂进行修理和调整。

DRIVE AXLE SELECTION

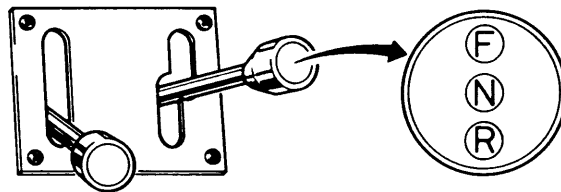
驱动桥转换

This crane can travel even on the rough and soft ground as well as on highways if the drive axles are properly selected.

本起重机备有驱动方式转换机构，因此不仅能在公路上行走，而且还具有在软弱地基等现场自由转移的越障能力。

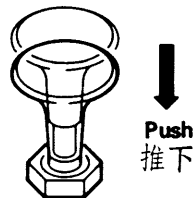
1. Place the carrier on the level ground with all the wheels directed straight, and position the forward/reverse select lever to N.

1. 在平坦路面上使所有车轮呈直行状态，将前进-后退转换杆扳回中位。



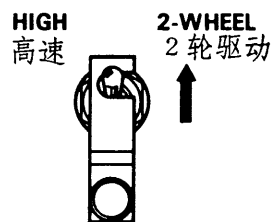
2. Push in the parking brake knob to release the parking brake.

2. 推下停放制动器手柄，释放停放制动器。



3. Position the DRIVE AXLE SELECT switch (the DRIVE SHIFT switch) to HIGH/2-WHEEL or LOW/4-WHEEL.

3. 将驱动方式转换开关拨到“高速、2轮驱动”或“低速、4轮驱动”的位置。



NOTE:

When positioning the switch to HIGH/2-WHEEL, direct the wheels straight.

注:

在转换为“高速、2轮驱动”位置前，应使所有轮胎呈直行状态。

HOW TO READ

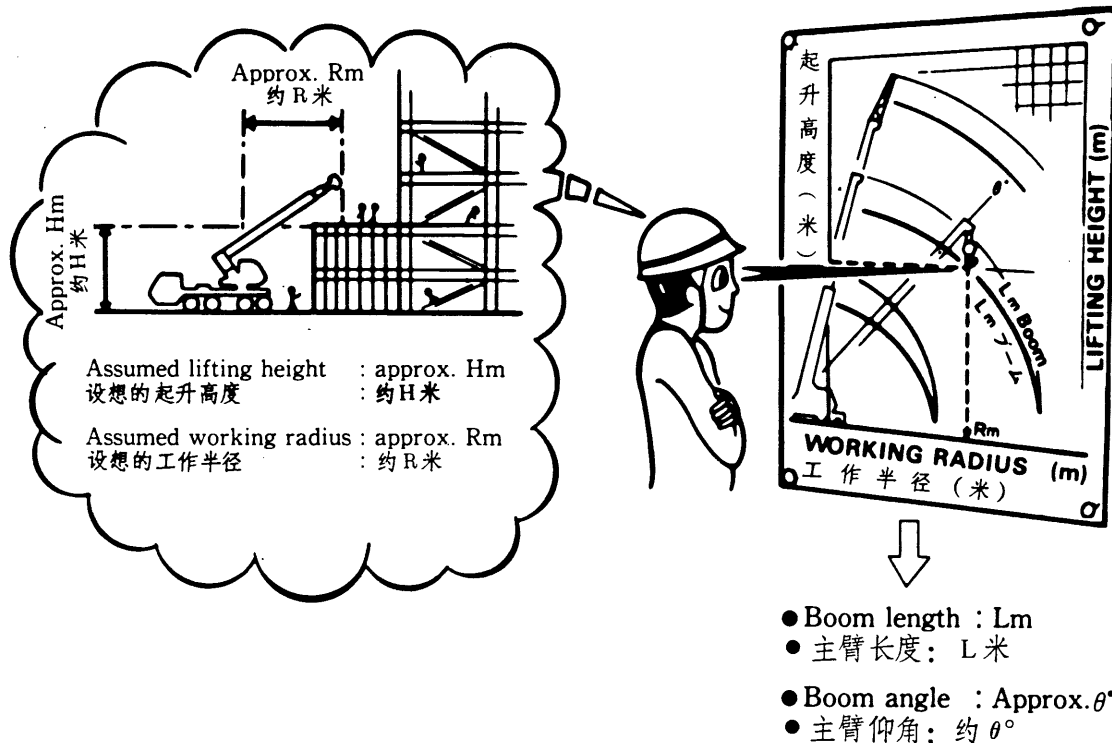
读图须知

WORKING RADIUS / LIFTING HEIGHT CHART

工作半径一起升高度图

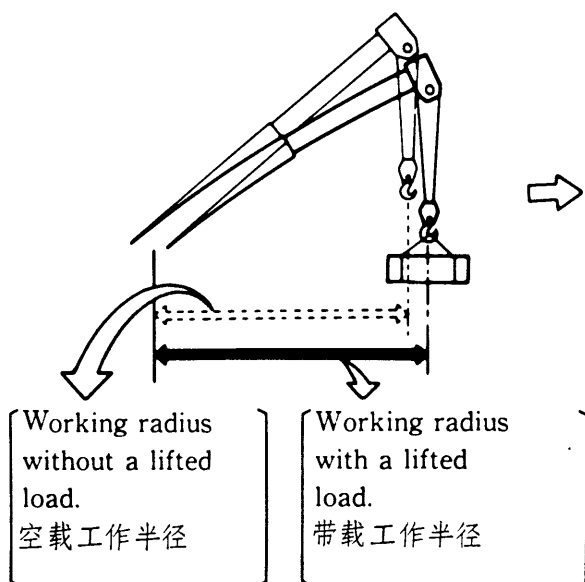
Effects of boom deflection are not included in the working radius/lifting height chart.

工作半径一起升高度图，未包括吊臂挠曲的影响。

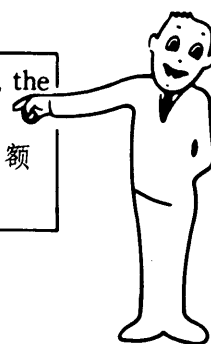


WORKING RADIUS UNDER LOAD

提升载荷时的工作半径



If the working radius changes, the total rated load also changes.
如果工作半径发生变化，额定总起重量也随之改变。



STARTING ENGINE AND OPERATING PTO

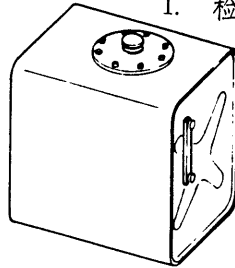
发动机的起动和取力装置的操作

Before starting the engine and operating the PTO:

在起动发动机和操作取力装置以前，应检查下列事项：

1. Check the hydraulic oil level.

1. 检查液压油箱内的油位。



2. Inspect the engine by referring to the engine instruction manual.

2. 关于起动发动机前的检查以及注意事项，请参阅发动机的使用手册。



ENGAGING PTO

取力装置接通操作

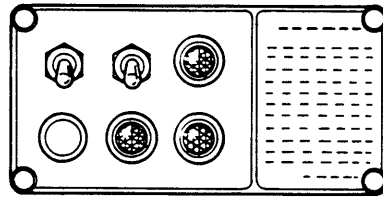
No.	Engaging PTO	取力装置接通操作
1	<p>Apply the parking brake. Make sure that the forward/reverse select lever is at the N position.</p>	<p>拉起停放制动器手柄加以制动。 确认一下前进-后退转换杆确实处于中位。</p>
2	<p>Start the engine by using the starter switch. Preheat the engine if not warm. Preheating time: Usually, approx. 40 seconds</p> <p>NOTES: (1) Do not run the starter motor continuously over 15 seconds. (2) If the engine fails to start at the first attempt, wait for 20 seconds or more to allow the batteries to recover, before trying again.</p>	<p>拧转起动开关，起动发动机。 如天气较冷时，要预热发动机后加以起动。 预热时间通常约需要40秒钟。</p> <p>注： (1) 起动机的连续旋转时间不得超过15秒钟。 (2) 如果一次起动操作未能成功时，应经过20秒钟以上待蓄电池回复蓄电后，重新进行起动操作。</p>

■ HEATER SWITCH (OPTIONAL)

■ 取暖装置开关(选配件)

Consult the heater manual for operating instructions.

关于取暖装置的使用方法, 请参阅其使用手册。

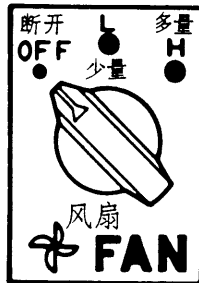


■ DEFROSTER SWITCH (Optional)

■ 除霜器开关(选配件)

Use this switch when the windshield collects moisture. Regulate the air flow by switching between L and H.

当挡风玻璃变为模糊时, 可使用除霜器开关。将开关拧到“少量”或“多量”位置, 即可调节除霜器的风量。

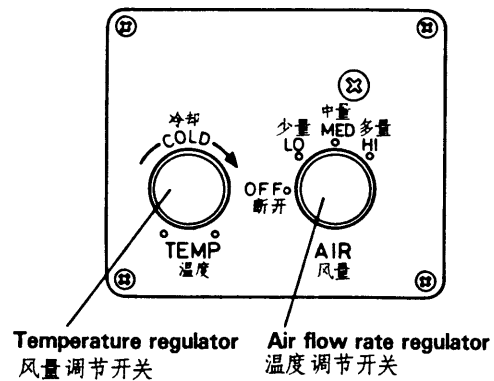
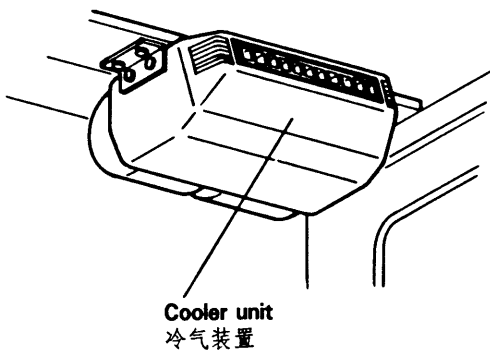


■ COOLER (Optional)

■ 冷气装置(选配件)

Use the following regulators to regulate the air flow rate and temperature.

操作下图所示的开关, 即可调节冷气装置的风量及温度。

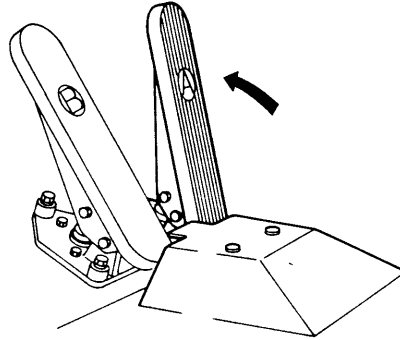


ACCELERATION

Depress the accelerator pedal, and the speed will increase in winch, boom telescoping, boom elevation and swing operation.

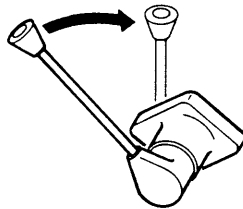
油门操作

如踩下油门踏板时，就能增大上车回转速度、吊臂变幅速度、吊臂伸缩速度和起升机构动作速度。



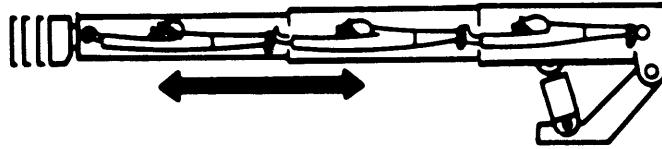
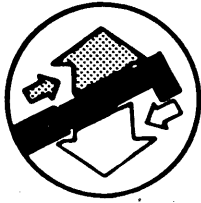
Actuate the engine throttle lever to maintain the accelerated speed.

如果需保持一定的发动机转速时，可使用发动机油门操作杆。



TELESCOPING OPERATION

吊臂伸缩操作



NOTES ON OPERATION

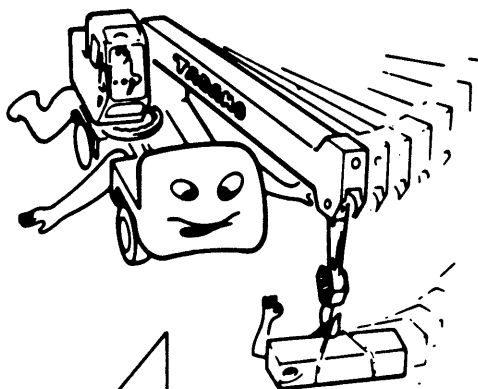
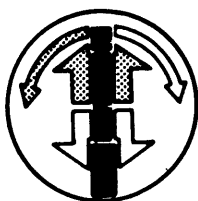
1. Lift up loads in the vertical direction only.
Avoid side loading or dragging loads on the ground.
2. The hook block will rise or lower when the boom is telescoped.
Compensate for this by simultaneously letting out or taking in the winch rope.
3. If the boom sections are not extending equally, correct it immediately.
4. Even with the telescoping control lever in neutral, an extended boom can change its length as time passes.
This is mainly because the volume of oil in the telescoping cylinder expands or contracts when temperature changes.
If oil temperature lowers 10°C, for instance, a boom extended by 5m will retract approx. 40 mm.
The extent of length change depends on the boom length, elevation angle, slide plate lubrication condition, etc.
To prevent boom retraction, observe the following:
 - ① Do not raise the oil temperature excessively.
 - ② Occasionally manipulate the telescoping control lever slightly to EXTEND to offset oil contraction.

操作注意事项

1. 只能垂直起吊载荷，不许拖拽尚未离地的载荷，要避免侧载。
2. 在伸缩吊臂时，吊钩会随之升降。因此，在进行吊臂伸缩操作的同时，要操纵起升机构操作杆，以调节吊钩高度。
3. 若发现各节主臂不等长地伸出时，应立即加以修正。
4. 在伸出吊臂后，经过一定的时间因液压油温度变化而吊臂会稍微伸缩。例如，吊臂伸出量为5米时，如液压油温降低10°C就约缩回40毫米。
但是，这种自然伸缩量除了液压油温的变化以外，还受到吊臂伸缩状态、主臂仰角、润滑状态等因素的影响而有所变化。
为了避免吊臂的自然缩回，应留意下列事项：
 - ① 不要使液压油温过于上升。
 - ② 吊臂发生自然缩回时，应适当进行伸缩操作来恢复所需长度。

SWING OPERATION

回转机构操作



NOTES ON OPERATION

1. Do not pull loads sideways by swinging the boom.
2. Check the outrigger condition before starting to swing.
3. Make sure that the area in the swing path is clear of personnel and obstructions before starting to swing.
4. Move the swing control lever slowly when starting and stopping swing.
5. Apply the swing brake when the boom is not swung.
6. The AML does not stop the boom swing motion, even when an overload occurs. When swinging the boom from the over-front area to the over-side during on-rubber operation, exercise special care to avoid overloading.

操作注意事项

1. 只能垂直起吊载荷，不许拖拽尚未离地的载荷，要避免侧载。
2. 上车回转之前，应确认支腿的状态确实正常。
3. 必须确保足够的作业空间。
4. 开始和停止回转操作时，要慢慢地扳动回转机构操作杆。
5. 不进行回转操作时，要使回转机构制动器处于制动状态。
6. 即使起重机发生过载现象，全自动力矩限制器的自动停止功能不会作用于回转机构。在不用支腿的起重作业中，当吊臂随其回转从前方区转到侧方区和后方区时，应注意避免过载现象。

□ ERECTING JIB

The flow chart below outlines the procedure for erecting the jib. Detailed instructions are given on the pages following this outline chart; the letters A, B, C...on the boxes indicate the applicable instructions.

□ 安装副臂

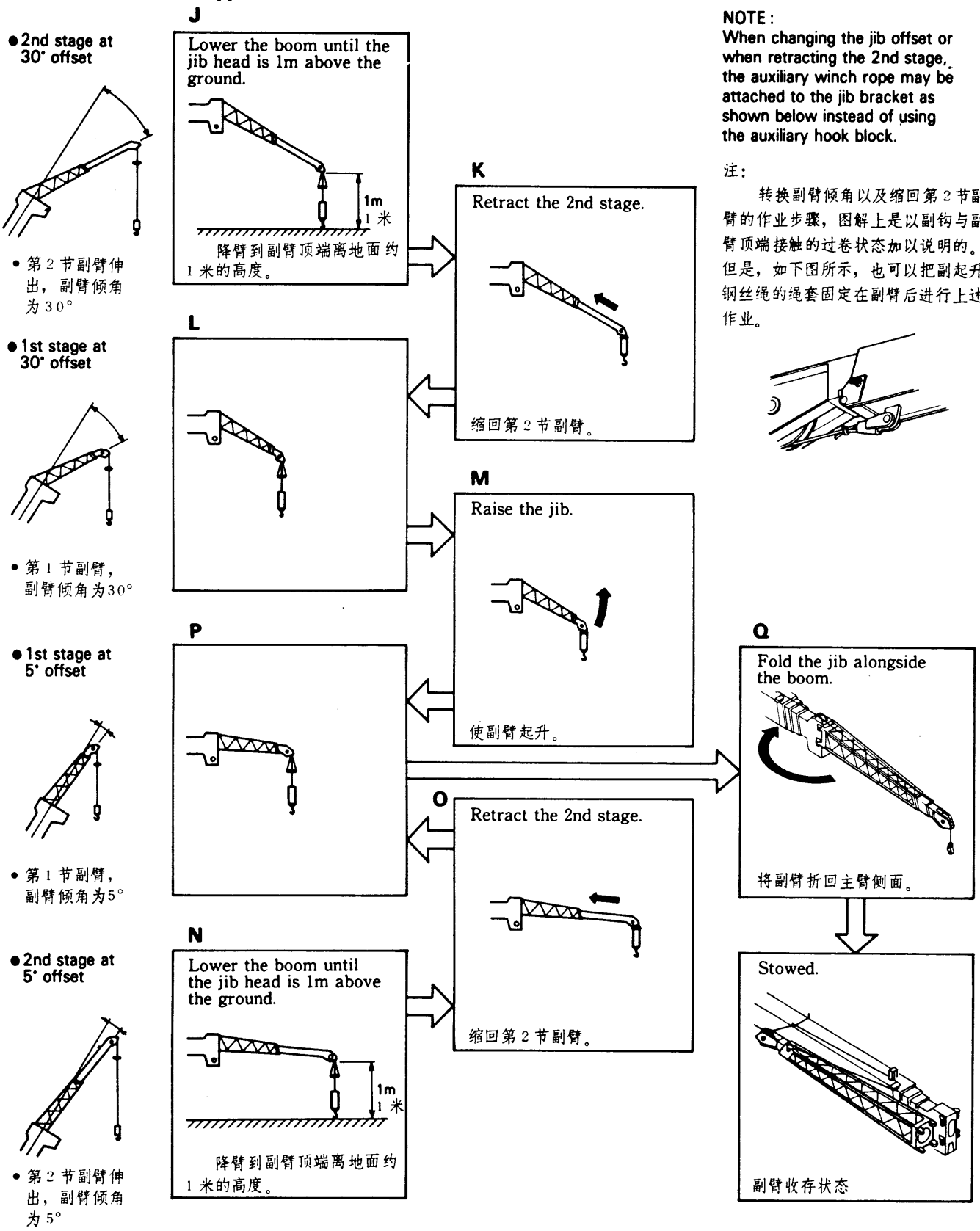
下面对副臂的安装步骤加以概略的图解。同时，从下页以后的各页载有各英文字母符号间的更为详细的操作步骤图解，请一并加以参阅。

□ STOWING JIB

The flow chart below outlines the procedure for stowing the jib. Detailed instructions are given on the pages following this outline chart, the letters J, K, L, ... on the boxes indicate the applicable instructions.

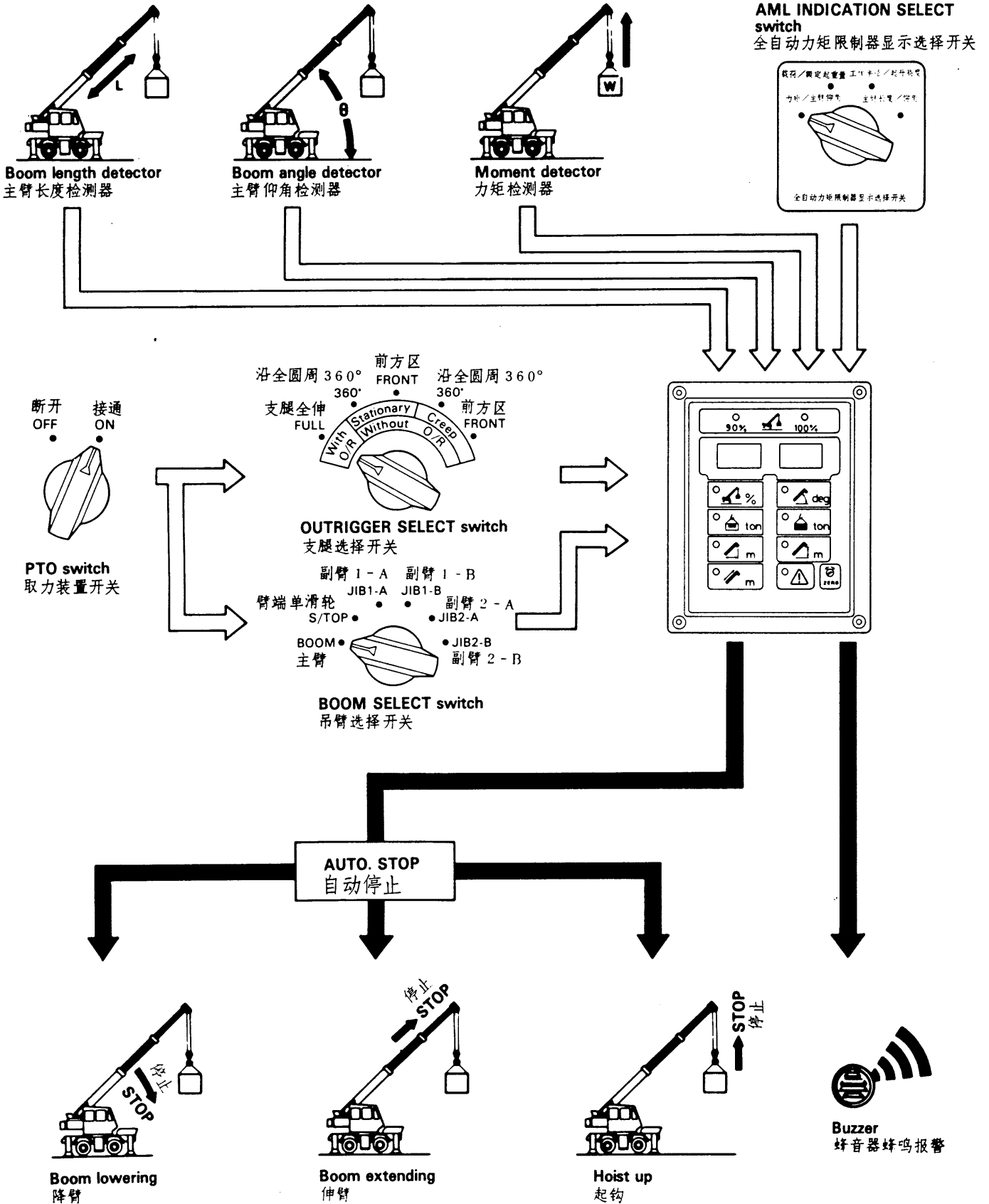
□ 收存副臂

下面对副臂的收存步骤加以概略的图解。同时，从下页以后的各页载有各英文字母符号间的更为详细的操作步骤图解，请一并加以参阅。



PRINCIPLES OF OPERATION

动作原理



CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below

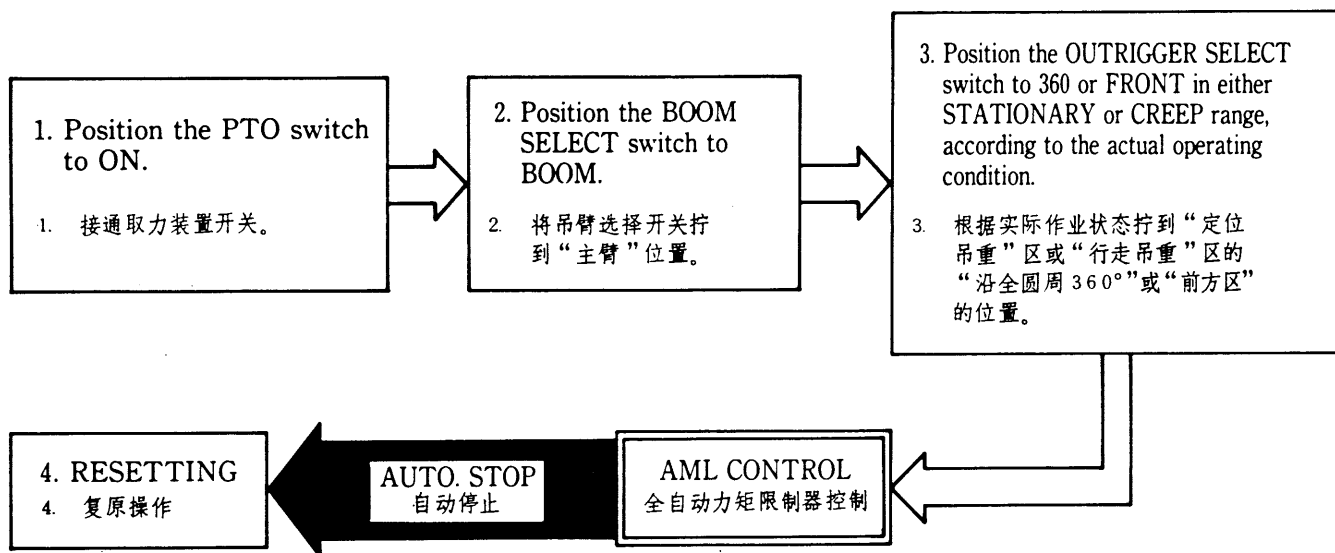


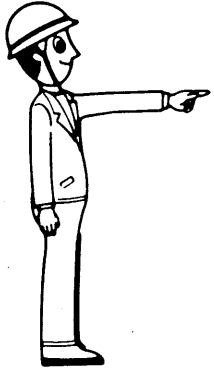
- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

■ ON-RUBBER OPERATION

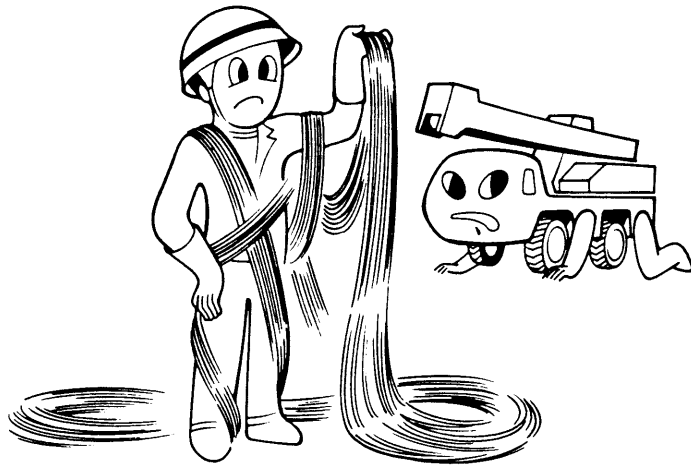
■ 不用支腿的作业





RE-REEVING WINCH ROPE

钢丝绳倍率的变换



STOWING AND TAKING OUT MAIN HOOK BLOCK

收存和取出主钩

□ STOWING

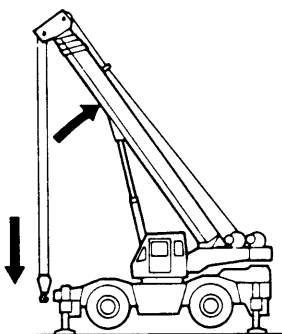
□ 收存操作

(1) Put the crane in the state shown.

(1) 使起重机呈下图所示的状态。

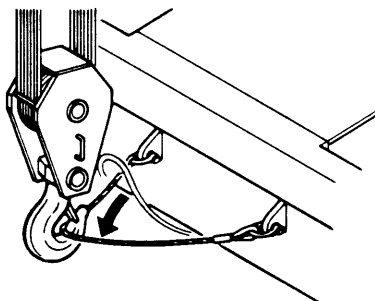
- Extend and set the outriggers.
- Move the hook block to the stowage.

- 打好完全伸出的支腿。
- 将主钩移到收存位置的上边。



(2) Fit the hook holder rope on the hook block.

(2) 将主钩挂到拉环上。

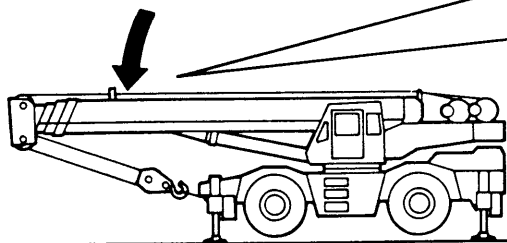


(3) Lower the boom to the horizontal.

(3) 使吊臂降到水平位置。

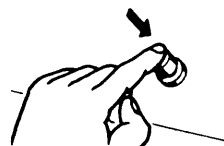
Be careful not to overtense the winch rope.


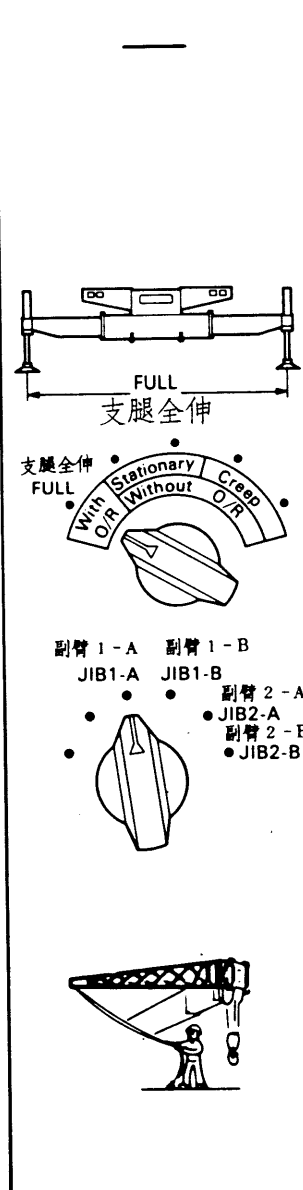
应注意避免钢丝绳过于拉紧。



When the boom is lowered below a certain angle, push the OVERWIND CUTOUT disable switch to clear the automatic stop condition.

当吊臂降到一定仰角以下时，应按下过卷停止解除开关来解除自动停止后，重新进行操作。



CAUTIONS	ILLUSTRATIONS 图 示	注 意 事 项
<p>Boom swinging</p> <p>2. Do not abruptly move the swing control lever.</p> <p>3. Keep the swing brake applied when the boom is not swung.</p>		<p>回转机构操作</p> <p>2. 不得急剧地扳动回转机构操作杆。</p> <p>3. 不进行回转操作时，应使回转机构制动器处于制动状态。</p>
<p>Jib</p> <p>1. Mount and stow the jib firmly.</p> <p>2. Extend the outriggers fully and set them, and position the OUTRIGGER SELECT switch to FULL.</p> <p>3. Position the BOOM SELECT switch to the proper position according to the actual jib mode.</p> <p>4. When folding and unfolding the jib, hold it by the auxiliary winch rope or the like, and swing it slowly.</p>	 <p>支腿全伸 FULL</p> <p>支腿全伸 FULL</p> <p>With O/R Without O/R Stationary Creep</p> <p>副臂 1-A 副臂 1-B JIB1-A JIB1-B</p> <p>副臂 2-A 副臂 2-B JIB2-A JIB2-B</p>	<p>副臂</p> <p>1. 应准确地进行支腿的伸出或收存操作。</p> <p>2. 一定要打好完全伸出的支腿，并将支腿选择开关拧到“支腿全伸”的位置。</p> <p>3. 按照副臂安装状态，转换吊臂选择开关的位置。</p> <p>4. 转动副臂时，用副起升钢丝绳或类似的工具将其拉住，慢慢转动。</p>

HAND SIGNALS


手 势 图

(Prevailing in Japan.
For your reference only.)

(适用于日本、仅供参考)

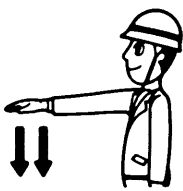
1. Attention./
Raise one arm upright.

1. 注意!
向上伸出一臂。



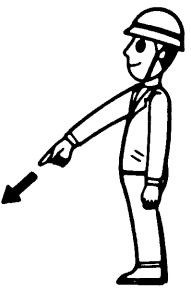
4. Hoist down
Stretch the arm level and move the hand downward with the palm facing down.

4. 降钩
将臂伸手、手心朝下，向下挥动。



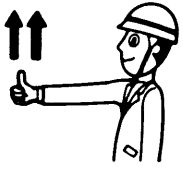
2. Indicating position
Stand near the position where the load is to be lowered, and indicate it.

2. 指出位置
站在载荷将要下落的位置附近，并用手指示。



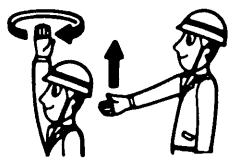
5. Raising boom
Point the thumb up with the fingers closed. Raise the hand from the level position.

5. 起臂
握拳、拇指向上，从水平位置向上抬手。



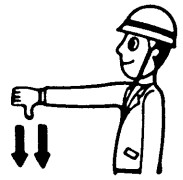
3. Hoist up
Raise one arm and draw a circle. Or, stretch the arm level and move the hand upward with the palm up.

3. 起钩
举起一臂、转一圈，或将臂平伸手心朝上，向上挥动。



6. Lowering boom
Point the thumb down with the fingers closed. Lower the hand from the level position.

6. 降臂
握拳、拇指向下，从水平位置向下落手。

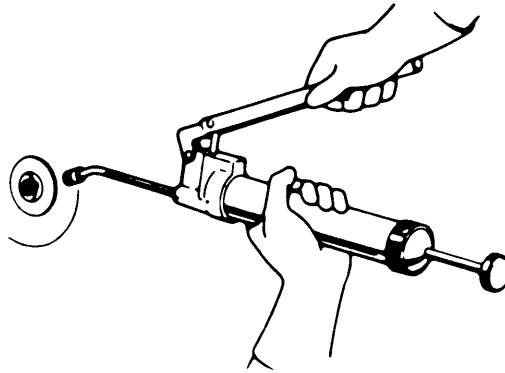


GREASE

Use the recommended greases. Idemitsu's Daphne Colonex Grease EP 2 and TADANO genuine grease TNR-2 are used for this crane.

润滑脂

应使用本手册推荐牌号的润滑脂。本起重机使用出光生产的Daphne Colonex EP 2 润滑脂以及我公司纯牌TNR-2 润滑脂。

 **ITEMS REQUIRING GREASE** **润滑部位** **UPPER STRUCTURE** **上 车**

Greasing Interval 润滑周期	Marks 符号	Greasing Points 润 滑 点	Q'ty 润滑点数	Type 润滑脂类别	Methods 方 法
Weekly 每 周	W1	Swing bearing and swing gear 回转机构支承和齿轮	4	grease 润滑脂	grease pump, coat 油枪、涂抹
	W2	Base boorn section, upper parts 基节主臂顶面	6	TNR-2 grease TNR-2 润滑脂	grease pump 油枪
	W3	Sliding box surfaces of 2nd, 3rd and top boom sections 第2节、第3节、顶节主臂滑动面	—	TNR-2 grease TNR-2 润滑脂	coat 涂抹
Monthly 每 月	M1	Main hook block 主 钩	1	arease 润滑脂	grease pump 油枪
	M2	Auxiliary hook block 副 钩	1	grease 润滑脂	grease pump 油枪
	M3	Winch rope 钢丝绳(起升机构用)	2	grease 润滑脂	coat 涂抹

NOTES:

1. Clean the grease nipples and surfaces to be coated with grease, before greasing.
2. The sliding surfaces which are not indicated in the above chart also require periodic greasing.
3. Monthly apply a thin coat of grease to the exposed portion of the elevating cylinder rod with the boom fully retracted and lowered to approx. 3°.

注:

1. 加油前, 擦净油杯和待涂油表面。
2. 未列在表中的滑动表面也定期加润滑脂。
3. 完全缩回主臂, 使主臂仰角成为约3°时, 应在吊臂变幅油缸活塞杆的露出部分每月加一次润滑脂(涂抹)。

TORQUE CONVERTER OIL

The crane is filled with Mobil's Mobil ATF 220 when it is delivered.

When adding oil, do not mix with other brands.

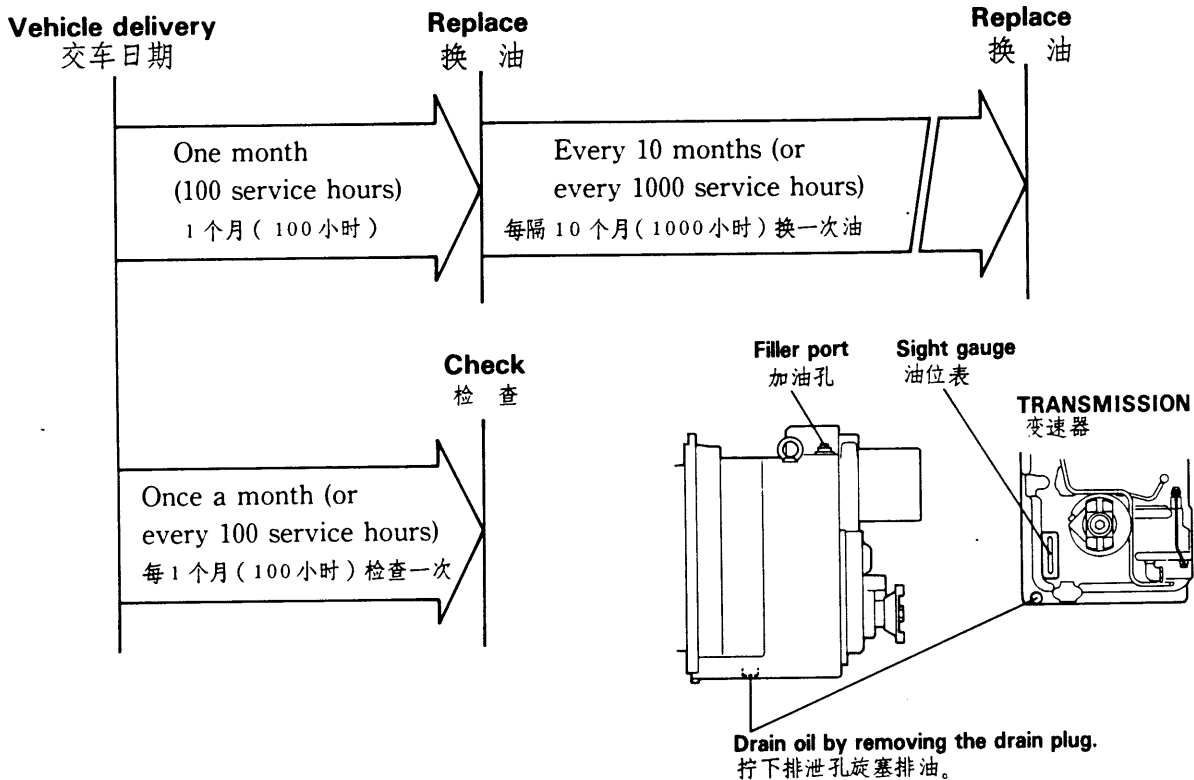
液力变扭器油

起重机发运前，已装满飞马生产的 Mobil ATF 220 液力变扭器油。

补充液力变扭器油时，不得混用其他制造厂牌号的液力变扭器油。

□ OIL CHECK AND REPLACEMENT SCHEDULE

□ 液力变扭器油的检查和换油周期



<How to refill with oil>

1. With the engine standing still, fill the casing with oil to the H mark on the sight gauge.
2. Gradually add oil to the specified level with the forward/reverse select lever in neutral and with the engine running at idling speeds.
3. Run the engine for approximately 5 minutes, and add oil until the oil level settles between H and L.

<加油方法>

1. 停止发动机，从加油孔加油，使油位达到油位表的 H（上限）标记。
2. 将前进-后退转换杆扳回中位，使发动机以怠速空转起来。如油位过于下降时加以补注。
3. 继续怠速空转约 5 分钟，使油位在 H（上限）与 L（下限）标记之间稳定下来。如有必要时再次加以补注。

TROUBLESHOOTING

故障和排除方法

If the crane develops a fault, inspect, and repair or replace the defective parts as necessary.

起重机发生故障时,先查明故障原因,然后修理或更换已损坏的零部件。

CRANE OPERATION

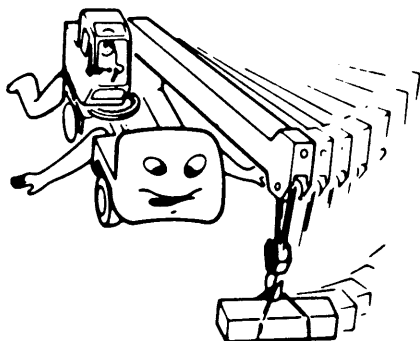
上车

Section 部分	Trouble 故障	Cause 原因	Remedy 排除方法
Electrical system 电系	Work lamp or boom top lamp will not light. 作业灯或臂端灯不点亮	<ol style="list-style-type: none"> 1. Bulb burned out. 2. Fuse blown. 3. Earthing faulty. 4. Wire broken or switch faulty. <ol style="list-style-type: none"> 1. 灯泡损坏 2. 熔断器烧断 3. 接地不良 4. 导线断路或开关失效 	Replace. Replace. Repair. Repair or replace. 更换 更换 修理 修理或更换
	Automatic moment limiter faulty. 全自动力矩限制器动作不良	<ol style="list-style-type: none"> 1. Fuse blown. 2. PTO switch faulty. 3. Solenoid valve faulty. 4. Earthing faulty. 5. Others. <ol style="list-style-type: none"> 1. 熔断器烧断 2. 取力装置开关失效 3. 电磁阀失效 4. 电磁阀接地不良 5. 其他 	Replace. Repair or replace. Repair or replace. Repair Contact our service station. 更换 修理或更换 修理或更换 修理 通知本公司业务服务部
	Overwind cutout device inoperative. 过卷停止装置不动作	<ol style="list-style-type: none"> 1. Fuse blown. 2. Cord reel faulty. 3. Cord broken. 4. Limit switch faulty. 5. Weight rope broken. 6. Solenoid valve faulty. 7. Solenoid valve earthing faulty. <ol style="list-style-type: none"> 1. 熔断器烧断 2. 卷线盒出故障 3. 导线断路 4. 限位开关失效 5. 重锤绳破断 6. 电磁阀失效 7. 电磁阀接地不良 	Replace. Repair or replace. Repair Replace. Replace. Repair or replace. Repair. 更换 修理或更换 修理 更换 更换 修理或更换 修理
Pump system 液压泵	Noise. 发生噪音	<ol style="list-style-type: none"> 1. Insufficient oil. 2. Air entering through suction line joints. <ol style="list-style-type: none"> 1. 油量不足 2. 吸油管接头进气 	Add oil. Repair. 加油 修理

Section 部分	Trouble 故障	Cause 原因	Remedy 排除方法
During traveling 行 车 中	Uneven braking effect among wheels. 主制动器制动效果不均匀	<ol style="list-style-type: none"> 1. Uneven tire air pressure among wheels. 2. Uneven tire wear among wheels. 3. Uneven brake pad clearance among wheels. 4. Loose spring U-bolt nuts. <ol style="list-style-type: none"> 1. 各轮胎气压不均匀 2. 各轮胎磨损程度不均匀 3. 各车轮盘式制动器磨擦块间隙不均匀 4. 钢板弹簧U形螺栓、螺母松弛 	Adjust pressure to standard level. Replace tires. Adjust. Tighten screws. 调整为标准气压 更换轮胎 调整 拧紧
	Heavy fuel consumption. 燃油消耗量大	<ol style="list-style-type: none"> 1. Fuel leakage. 2. Blocked air cleaner. 3. Too low tire air pressure. 4. Clutch slippage. 5. Dragging brake. 6. Improper operation. <ol style="list-style-type: none"> 1. 燃油漏泄 2. 空气滤清器被堵塞 3. 轮胎气压不足 4. 离合器打滑 5. 制动器拖滞 6. 使用条件不当 	Repair. Clean or replace element. Adjust pressure to standard level. Repair. Adjust. Avoid jerky start, hard braking, etc. 修理 冲洗或更换滤芯 调整为标准气压 修理 调整 避免急起步、急停车等操作
	Heavy engine oil consumption. 机油消耗量大	<ol style="list-style-type: none"> 1. Incorrect oil. 2. Too much oil. 3. Insufficient warming up. 4. Oil used too long without change. 5. Oil leakage. <ol style="list-style-type: none"> 1. 所用机油不适当 2. 机油量过多 3. 升温运转不充分 4. 机油更换时期过迟 5. 漏油 	Change with recommended oil. Reduce oil to specified level. Warm up engine sufficiently. Change oil at specified intervals. Repair. 更换为推荐牌号 调整为规定油量 充分进行发动机升温运转 按规定周期换油 修理
	Excessive loss of coolant. 冷却水过早减少	<ol style="list-style-type: none"> 1. Damage in radiator or hose. 2. Insufficiently closed drain cock. <ol style="list-style-type: none"> 1. 散热器及其软管损伤 2. 排泄孔旋塞松弛 	Repair or replace. Close securely. 修理或更换 牢固地拧紧

SWING BRAKE(ADJUSTMENT)

回转机构制动器(调整)



When the brake lever stroke increases excessively, and the braking effect decreases, adjust the brake as follows:

如果发现回转机构制动器操作杆的行程变大而制动力有所下降时, 应按下述步骤加以调整。

WORKING CONDITIONS

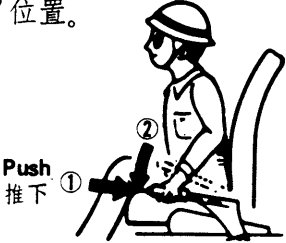
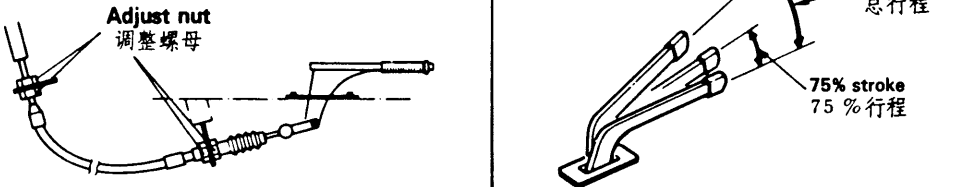
1. Set up the crane on firm, level ground.
2. Fully retract the boom.

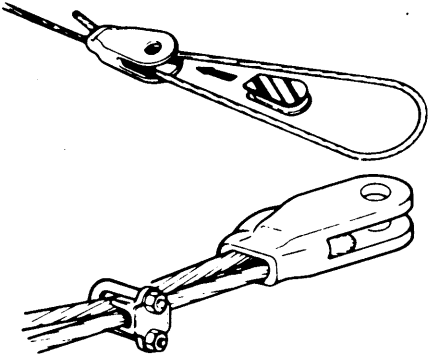
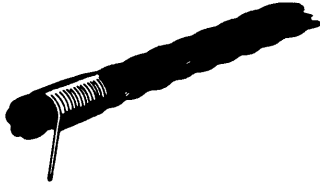
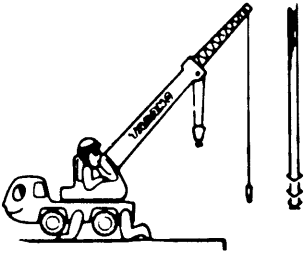
作业条件:

1. 将起重机支在坚实而平坦的地面上。
2. 完全缩回吊臂。

ADJUSTMENT

调整

No.	Procedure 操作步骤	Note 注意事项	Tools 使用工具
1	<p>Completely release the swing brake lever. 将回转机构制动器操作杆推到“释放”位置。</p> 		
2	<p>Turn the adjust nuts until the moving range of the swing brake lever becomes approx. 75% of the maximum stroke. 拧转调整螺母, 使回转机构制动器操作杆的行程成为其总行程的约 75%。</p> 	<p>Reference: Max. stroke : 12 notches 75% stroke : Approx. 9 notches (参考) 总行程 12 个齿 75%行程 约 9 个齿</p>	Wrench 扳手

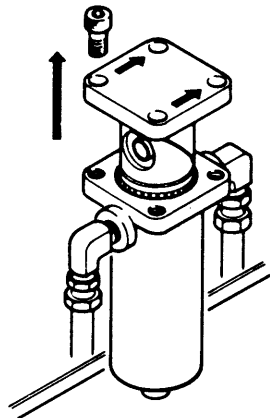
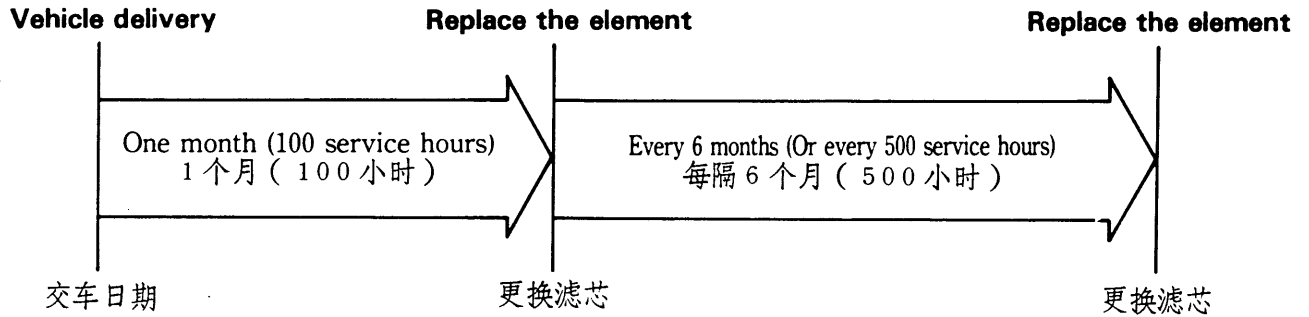
No.	<p>Procedure 操作步骤</p>	<p>Note 注意事项</p>	<p>Tools 使用工具</p>
8	<p>Attach the rope socket and rope clip to the rope. 将绳套和绳夹装在钢丝绳上。</p> 	<ol style="list-style-type: none"> Put the wedge in the correct orientation. Bind the rope end with a wire or vinyl tape. <p>1. 安装楔子的方向要正确。 2. 钢丝绳端部要用铁丝或乙烯塑料带缠紧。</p> 	<p>Hammer Wrench Wire or vinyl tape 手锤 扳手 铁丝或乙烯塑料带</p>
9	<p>Attach the auxiliary hook block. 安装副钩</p>		
10	<p>Raise and extend the boom, then lower the hook block until no turn of the rope remains on the winch drum. 将主臂起到高仰角并加以伸出，然后降下副钩，直到将卷筒上的钢丝绳全部放完为止。</p> 	<p>Exercise care not to excessively lower the hook block. Otherwise the rope may be damaged. 注意不要过分降钩，否则会损坏钢丝绳。</p>	

LOWER HYDRAULIC CIRCUIT

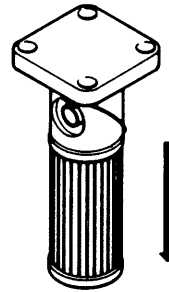
下车油路

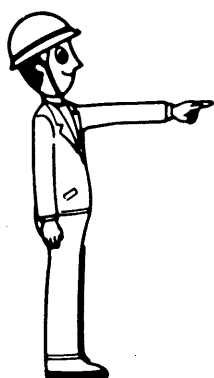
FILTER FOR TORQUE CONVERTER
CIRCUIT

液力变扭器油路用滤油器

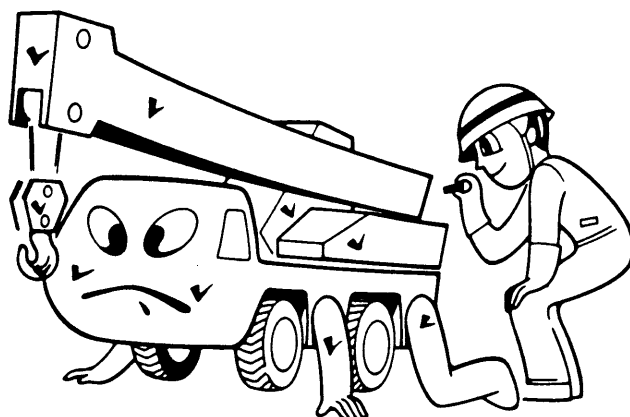


(Inside chassis frame)
车架内侧





PERIODIC INSPECTIONS
定期 检 查



ON

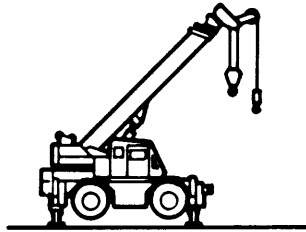
检查保养项目	检查保养周期					判定标准	备注
	作业前检查	每隔1个月	每隔3个月	每隔6个月	每隔12个月		
游隙、松动和振动	●	●	●	●	●	沿方向盘外周测量游隙 液压转向控制阀开始送油时： 20毫米	
	●	●	●	●	●		
方向盘	●	●	●	●	○	在发动机旋转的状态下，应能顺利进行转向操作。	
所需操作力					○	能以10公斤以下操作力转动方向盘	
漏油	○	●	●	●	●	更换液压转向控制阀	
安装零件的松弛		●	●	●	●		
轴承部的游隙					●		
管路接头等的漏油和损伤	●	●	●	●	●	软管和O形环每隔24个月更换一次	※
滤油器					○	每隔500小时更换一次滤芯	
转向机构用电磁阀	○	○	○	○	○	能顺利进行2轮转向、4轮转向、蟹行运动的转向操作。 O形环和密封件每隔24个月更换一次。	※

Check and Maintenance	Frequency					Standards	Note
	Before operation	1 month	3 months	6 months	12 months		
Play, looseness, backlash	●	●	●	●	●	Backlash at the wheel periphery : For selector valve: 20mm	
	●	●	●	●	●		
Operation condition	●	●	●	●	●	Smooth operation without undue resistance, with the engine running.	
Turning force					○	10kg max.	
Oil leakage	○	●	●	●	●	Replace Orbitrol.	
Loose mounting			●	●	●		
Play in bearing					●		
Oil leakage and damage of piping, hose, and joints.		●	●	●	●	Replace hose and O-rings every 24 months.	※
Filter					○	Replace filter element every 500 hours.	
Steering solenoid valve	○	○	○	○	○	Steering switch-over between 2-wheel, 4-wheel, and crab steering modes should be smooth. Replace O-rings and seals every 24 months.	※

检查保养项目	检查保养周期				判定标准	备注
	作业前检查	每隔1个月	每隔3个月	每隔6个月		
电系	充电装置	●	●	●		
	蓄电池	●	●	●	液位在规定的下限液位以上 液温 20 °C时 比重: 1.27~1.29	
电系布线	●	●	●	●		
发动机	起励状态和噪音	●	●	●		
	低转速和加速状态	●	●	●	怠速空转: 600 转/分	
	排气状态	●	●	●		在作业前 检查中只 检查排气 颜色
	空气滤清器滤芯状态	●	●	●	每隔 200 小时清理一次 每隔 1200 小时更换一次	
空气滤清器尘埃指示器	○				如出现红色标识时, 应清理或更换滤芯	

Check and Maintenance	Frequency					Standards	Note
	Before operation	1 month	3 months	6 months	12 months		
Battery charging condition	●	●	●	●	●		
Battery charger	●	●	●	●	●		
Battery	●	●	●	●	●	Level must be at specified height.	
Electric equipment	●	●	●	●	●	At electrolyte temperature of 20°C : Sp. gravity : 1.27~1.29	
Electric wiring	●	●	●	●	●		
Engine	●	●	●	●	●		
Engine proper	●	●	●	●	●		
Starting condition and noise	●	●	●	●	●		
Low speed run and acceleration	●	●	●	●	●	Idling : 600rpm	
Exhaust gas	●	●	●	●	●		Only exhaust color is checked at initial check
Air cleaner element	●	●	●	●	●	Change at every 200 operating hours. Change at every 1200 operating hours.	
Air cleaner dust indicator	○					When red signal is given, clean or replace element.	

- Extend the outriggers fully and set them. Position the OUTRIGGER SELECT switch to FULL.



- 打好完全伸出的支腿，将支腿选择开关拧到“支腿全伸”的转换位置。



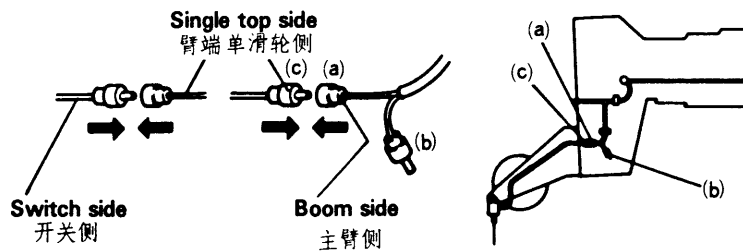
- Position the BOOM SELECT switch to S/TOP before operating the single top.

- 使用臂端单滑轮进行起重作业之前，一定要将吊臂选择开关拧到“臂端单滑轮”位置。



- Connect the overwind cutout device leads as shown below.

- 按下图所示的方法连接过卷停止装置的导线。



CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL