QUALITY FOR LIFE

AL-KO电制动车轴
ELECTRIC BRAKED AXLES

使用保养说明书

OPERATING INSTRUCTIONS
SERVICE MANUAL
WARRANTY DETAIL

烟台爱科机械设备有限公司

AL-KO (Yantai) Machinery CO., LTD

1349934

Dear Owner,

Congratulations on the purchase of your trailable unit.

The manufacturer has included this manual with the other documentation as an assurance to you that the complete running gear and braking system is supplied by AL-KO International.

AL-KO is the leading manufacturer and supplier of axles, electric brakes, brake drums and other products to provide the best rolling and stopping performance available.

The running gear and brake system on your trailable unit requires and deserves the same care and service as your towing vehicle. This manual will explain how the electric brakes and running gear work and the service required for best performance and road safety.

The AL-KO running gear and brake system is covered by a 12 months/20,000 km limited warranty as detailed on Page 1 of this manual. Please take the time to study the warranty details and return the registration card to us.

Yours faithfully

AL-KO (Yantai) Machinery CO., LTD.

W A R R A N T Y

This trailable unit has been equipped by the manufacturer with running gear and electric braking system supplied by AL-KO International. The running gear and electric braking system is warranted by AL-KO International, subject to the conditions stated herein, to be free from manufacturing defects and faulty material within a period of 12 months from, or 20,000 km after the date of first registration with a State or Territory Traffic Authority, whichever occurs first.

Conditions:

1. That the running gear or electric brakes have not at any time been serviced by any other person other than AL-KO International or an authorised AL-KO Service Agent.

2. That the defect was not due to misuse, negligence or similar cause.

3. That the defect was not due to normal wear and tear.

4. That the warranty specifically excludes wear of magnet, brake linings and any normal maintenance.

5. That the cost of transportation both to and from AL-KO International or any Authorised Service Agent is to be paid for by the owner.

6. That there shall not in any event be liability for any consequential loss or damage whatsoever, direct or indirect.

7. That the trailable unit has only been used for the purpose it was designed and in accordance with the specification on the trailer plate and that the vehicle towing capacity is not exceeded.

8. A warranty authorization order number must be obtained from AL-KO International prior to any warranty rectification being undertaken. Contact should be made with the nearest AL-KO International state office listed on page 10.

OPERATORS SERVICE & WARRANTY MANUAL

HOW YOUR ELECTRIC BRAKES OPERATE

The electric trailer brakes perform a similar function to the brakes on your car. The major difference is that the car brakes use hydraulic pressure to expand the brake shoes, whilst the trailer brakes use an electro magnet and lever system. Activation of the electric brakes is via a controller mounted inside your towing vehicle.

The controller should provide both manual application of the trailer brakes and automatic braking balanced to that of your towing vehicle (when you push the brake pedal in the car, the brakes on the trailer are also activated via the brake controller). When the controller is activated high capacity electro magnets are energized and attract to the inside surface of the brake drum. Due to the rotation of the drum, the magnets move the lever arm in the same direction. This movement causes the actuating block at the top of the brake to push the front shoe against the drum. The force of the front shoe in turn pushes the back shoe into contact with the drum.

Brake performance is proportional to the load of the towing vehicle and the trailer. Ensure at all times that the towing capacity of the car and the manufacturers recommended laden weight are not exceeded.

HOW THE BRAKE CONTROLLER WORKS

AL-KO International only recommend Hayes and Tekonsha, DEXTER predator DX2Brake Controllers for smooth balanced brake performance, due to their motion sensing properties.

Once properly installed and adjusted the brake controller can be operated both automatically and manually. When the brakes are applied the controllers electric circuit is operated automatically. As the tow vehicle slows down a sensor inside the controller reacts to the deceleration and increases the power to the trailer brakes, thus providing smooth and proportional braking of the trailer. For manual operation, the controller is provided with a sliding control. This activates the stop lights and the brakes, and the indicator light on the front of the controller panel glows from dim to bright the further the control is moved, indicating an increase in braking power.

WARNING

There are several different types of brake controllers available, some with motion sensors and some without a motion sensing device. If a brake controller without motion sensor is used the trailer brakes *will not* be applied in proportion to the tow vehicle and smooth balanced braking will not be achieved in all conditions.

For further assistance in correct controllor selection please contact AL-KO International direct.

More detailed information on the operation of the controller is available in the installation instructions contained with each unit.

For further information contact your local AL-KO International dealer or AL-KO International direct.

FITTING TRAILER BRAKES

Electric trailer brakes when used and adjusted properly provide many kilometers of smooth, dependable braking operation.

Electric trailer brakes must have a complete electrical circuit, any broken or poor wire connections will prevent or interfere with the flow of electrical power resulting in poor or no braking.

Electric brakes use around 6.5 amps for every two magnets. Wiring should be used that is of suitable capacity for the total number of magnets fitted.

AL-KO International recommend that all electrical connections be soldered or made via screw type connectors.

On new trailers a break in period may be required to achieve maximum braking performance.

Proper Brake Balance Between Your Vehicle and Trailer

The brakes on your towing vehicle are designed to stop in a safe effective manner, similarly the electric brakes fitted to your trailer are designed to effectively stop the weight of the trailer to which they are fitted.

It is important that the performance of the brakes on both the towing vehicle and the trailer are balanced so that neither are overloaded. If the correct balance is not obtained between the braking systems, then overheating of either system may occur with a deterioration in brake performance. Correct brake balance is obtained when the trailer brakes have a slight lead over the brakes on the towing vehicle. This can be accomplished by the adjustment of the controller in the towing vehicle. When correctly adjusted there will be no sensation of the trailer pushing the vehicle, nor any excessive pull during braking.

IMPROPER BRAKING

USING TRAILER BRAKES ALONE

USING TOW VEHICLE BRAKES ALONE

PROPER BRAKING

TOGETHER AS ONE BRAKING SYSTEM

GENERAL MAINTENANCE

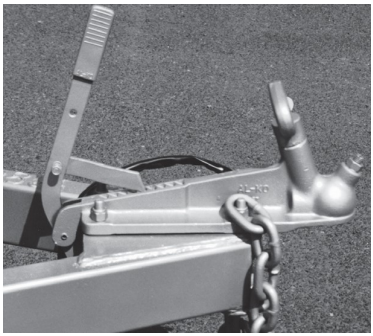
In order to maintain the safe reliable stopping power of your AL-KO brake system it is recommended that the brakes be serviced at regular intervals. Contact your local AL-KO International Service Centre or brake specialist for assistance.

The following list of general maintenance items should be carried out as a periodic maintenance check. **These are service functions, not warranty items.**

1. Brake Adjustment Procedure

The brakes fitted to an axle or independent rubber suspension system supplied by AL-KO International are adjusted prior to supply. A brake clean and adjustment should be carried out between the first 300 to 1000 kilometres and then at the service intervals recommended on Page 8.
Located in the back of the brake backing plate is a small opening covered by a protective plug. With the trailer wheels off the ground, rotation of the star wheel, (as shown in the diagram below), will result in correct brake adjustment. With a screw driver rotate the star wheel until the brake drag makes it difficult to turn the wheel. The star wheel can then be turned in the opposite direction to allow the trailer wheel to turn 3/4 to 1 revolution freely when spun.

Park Brake Cable Adjustment



In the **laden** condition it is imperative that the park brake lever engages and secures the brakes in, it's recommended, 5th or 6th notch of the coupling from the towball end – not closer (see photo).

Failure to adjust the cable tension in this manner will, through suspension movement on both independent suspension and beam axle with leaf springs, cause the brake shoes to be partially actuated and excessive heating of the brake and drums to occur. Prolonged use, if incorrectly adjusted, will cause initially the back (secondary shoe) to overheat to the extent of disintegration of the brake lining and will result in deterioration of brake performance until eventual brake failure.

1. Brake Drum / Hub

The brake drum should be checked for excessive wear in accordance with the periodic maintenance check list on page 8.

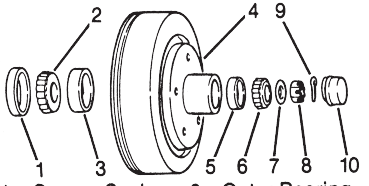
* If the drum has heavy scoring, or has a run out that exceeds 0.5mm it should be machined by your local AL-KO International Service Centre.
* If the bore of the drum exceeds the maximum diameter cast on the drum, it should be replaced.
* Brake drums that have been machined must be thoroughly cleaned and checked (by AL-KO International) before installation.
* If the magnet wearing surface on the inside of the drum is unevenly worn or badly scored, we suggest that the drum be referred to AL-KO International for machining or replacement.

NOTE: Any time that the drum is replaced a new magnet should also be installed.

2. Wheel Bearings

Bearings must be inspected and lubricated periodically to ensure reliable, safe operation of your trailer. We recommend that your trailer be taken to your local AL-KO International Service Centre where correct wheel bearing service can be undertaken.

If you need to remove a hub drum from your trailer, the diagram below shows the component relationship.



1—Grease Seal
2—Inner Bearing
3—Inner Cup
4—Hub/Drum
5—Outer Cup
6—Outer Bearing
7—Spindle Washer
8—Spindle Nut
9—Cotter Pin
10—Grease Cap

* Seals should be checked and replaced if found to be nicked, torn or worn.

* If the bearings are damaged or worn they should be referred to your local AL-KO International Service Centre where replacement may be recommended.

NOTE: It is recommended to replace the bearings and cups in sets. Manufacturers part numbers are stamped into the bearing cup and cones for identification.

* Always lubricate the bearings on your trailer with high quality wheel-bearing grease.
* Every time the wheel hub is removed, the wheel bearings must be adjusted.

To Adjust the Wheel Bearings

Turn the hub slowly to seat the bearings while tightening the slotted nut until firm.

Loosen the slotted nut and then re-tighten by hand (not with a wrench) to a “finger-tight” condition to align the first notch with the hole in the shaft and insert the split pin. It is recommended that bearing adjustment be carried out by your local AL-KO International Service Centre to ensure that correct bearing adjustment is maintained.

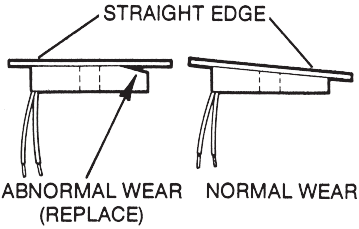
3. Brake Linings

Periodic inspection for lining wear or contamination from oil or grease should be undertaken by your local AL-KO International Service Centre.

* If the lining is worn to within 0.8mm of the rivet or to a minimum thickness of 1.5mm on bonded linings or shows irregular wear or contamination from a foreign substance, shoes should be replaced with original parts from your local AL-KO International Service Centre.

4. Magnet Assembly

The magnet assembly can be inspected for wear without removing it from the brake, by laying a straight edge over the length of the magnet space as shown.



Magnets may be used with normal wear until the white plastic under the friction element is barely visible. For off-road application AL-KO have developed a unique magnet specifically designed to prolong magnet life. This magnet is identified by a special high tech plastic core in the centre of the magnet.

This core should be periodically inspected for wear and the magnet replaced if excessive clearance or wear is evident. As the off-road magnet does not use a magent retaining clip, we suggest it is held in place for service installation by a light rubber band which will disappear on the first brake application.

Replacement magnets are available from your local AL-KO International Service Centre.

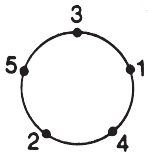
5. Wheel Mounting

It is important to maintain proper torque specifications to provide safe and secure attachment of the wheel to the hub drum.

* Start all nuts by hand to prevent cross threading.
* Tighten nuts in three stages using a cross star pattern.
* Whenever wheels are removed and refitted the wheel nut torque should be checked. Wheel nuts should be tightened to the torque specified by the wheel manufacturer. Please ask the supplier of your caravan or trailer for the correct torque setting. Always use a quality torque wrench to check wheel nut torques.

  It is recommended that the wheel nut tension be checked every 100kms for the first 400kms of your initial trailer use and then as per the periodic maintenance check list on page 8.

* Tighten wheel nuts using a cross star pattern as shown:



* As a guide the suggested wheel nut torque is as below:

STUDS	TORQUE
7/16 studs	80ft-lbs / 108nm
1/2 studs	100ft-lbs / 135nm
9/16 studs	140ft-lbs / 190nm
5/8 studs	175ft-lbs / 237nm
10mm studs	50ft-lbs / 68nm
12mm studs	100ft-lbs / 135nm
14mm studs	154ft-lbs / 209nm

PERIODIC MAINTENANCE CHECK LIST

CHECK	FUNCTION REQUIRED	DAILY	Every 5000 km or 6 months	Every 10000 km or 12 months	PAGE Number
Trailer Brakes	Test that they are functioning properly.	●			
Air Pressure	Inflate tyres to manufacturer's specifications.	●			
Wheel Nuts*	Tighten to proper torque specifications.		●		7
Wheel Rims	Inspect for dents, damage, or out of round.		●		
Brake Adjustment**	De-Dust. Inspect for lining wear and adjust.			●	4
Brake Magnets	Inspect for uneven wear.			●	7
Wheel bearings and cups	Inspect for wear or damage and lubricate.			●	5
Hub/Drum	Inspect for heavy scoring or wear.			●	5
Seals	Inspect for damage or wear.			●	6
Brake linings	Inspect for lining wear and contamination.			●	6
Park Brake	Inspect for excessive travel and adjust.			●	

* Tighten wheel nuts every 100 km for the first 400 km and after every change in wheel mounting. Refer Page 7.

** Adjust brakes and de-dust after first 300 to 1000 km then at above intervals.

TROUBLE SHOOTING GUIDE

FAULT	CAUSE	CHECK FOR
No Brakes	No electrical power	Poor connections Break in electrical circuit Blown fuse Controller setting
No Brakes	Worn magnets	Replace with genuine parts from AL-KO
No Brakes	Incorrect brake shoe clearance	Adjust brakes
Weak Brakes	Loose electrical connection	Check all connections
Weak Brakes	Worn out linings	Replace with genuine parts from AL-KO
Weak Brakes	Worn out drum	Remachine or replace if oversize
Weak Brakes	Excessive load	Reduce trailer load
Weak Brakes	Lining contaminated	Replace linings and seals with genuine parts
Intermittent Brakes	Broken magnet wire	Bench check magnets and replace with genuine parts
Intermittent Brakes	Loose wire connections	Check all wire connections
Intermittent Brakes	Out of round drum	Remachine drum
Intermittent Brakes	Loose wheel bearings	Check and adjust wheel bearings
Locking Brakes	Malfunctioning controller	Check and replace if necessary
Locking Brakes	Stop lights connected in brake circuit	Check wiring of controller and trailer
Locking Brakes	Loose brake parts	Check for loose rivets, broken springs etc.
Locking Brakes	Worn wheel bearings	Replace bearings Examine hub
Locking Brakes	Out of round drum	Remachine drum

烟台爱科机械设备有限公司

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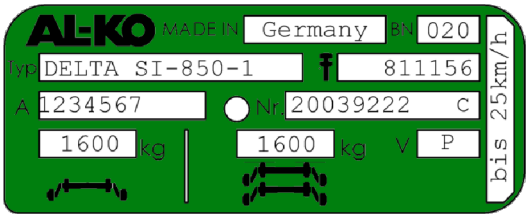
电话(Tel)：（0535）6727778　传真(Fax)：（0535）6727778

AL-KO挂车底盘的零配件服务：

定购零配件时，要给出详细的型号说明。

请把AL-KO小型挂车底盘的数据写在下面，以便利于得到正确的配件供应。



亲爱的用户

感谢您购买AL-KO的挂车部件

制造商把AL-KO 行走和制动系统提供给您的时候，这个文件连同其它文件确保也一起提供给您。

AL-KO是处于行业领导地位的车轴、电制动鼓和其它产品的制造商和供应商，为您提供优良性能的产品。

在你的可拖挂单元上的行走和制动系统需要并应该像您的牵引车一样被关注和维护。这个手册将介绍电制动和行走系统如何工作的以及为保证产品性能和道路安全所需要的必要的维护。

AL-KO 行走和制动系统包括12个月/20000km的内有限质保，这在手册第一页有详细说明。请花一些时间来学习保修细节，并反馈保修卡给我们。

您忠诚的朋友

烟台爱科机械设备有限公司

质　保

挂车制造商把AL-KO制造的可拖挂单元上的行走和电制动系统装备到你的挂车产品上。行走和电制动系统的在首次使用12个月内或者20000km（以先到达者为准），因产品质量问题或者材料缺陷问题，由AL-KO免费质保。

情况:

1. 行走和或者电制动系统不能由AL-KO 或者AL-KO受权服务代理以外的人进行维修。

2. 产品质量问题不包括因不正当使用，过失或相似情形下造成的问题。

3. 产品质量问题不包括正常的磨损和消耗。

4. 电磁体磨损，制动蹄片和一些常规维护不在保修范围内。

5. 到AL-KO 或者AL-KO 授权代理的运费，由客户自己承担。

6. 不管直接或间接的附带损失或损坏都在不负责范围内。

7. 拖挂单元只能按设计要求的用途使用并与挂车平台技术规格一致，牵引车牵引质量不能超载。

8. 在开始质保维修前，必须从AL-KO获得质保受权号。应当同页15中所列的就近的AL-KO公司联系。

维修和保养手册

你的电制动器是如何工作的

电制动挂车制动器和你的轿车上制动器有相似的功能。最大的不同是轿车的制动器是通过液压撑开制动蹄，而挂车制动是通用电磁体和杠杆。电制动器的动作通过安装在你的牵引车里面的控制器来执行。

控制器应当既能提供手动调节也能提供自动调节来平衡你的牵引车。（当你推动汽车里面的制动踏板，挂车上的制动器也通过控制器进行动作）。当控制器大容量动作时，电磁体充电并吸到制动鼓内表面。由于制动鼓转动，电磁体移动杠杆臂向相同方向转动。这种移动引起制动器上部的驱动块把前制动蹄推向制动鼓。前制动蹄的力反过来推动后制动蹄接触到制动鼓。

制动性能与牵引车和挂车的载荷相匹配。确保任何时候汽车的牵引能力没有超过制造商推荐牵引质量。

控制器是如何工作的

AL-KO公司仅推荐使用Hayes和Tekonsha，DEXTER predator DX2制动控制器来平稳制动性能，这是基于其动作传感器的性能考虑的。

一旦正确地安装调试，制动控制器能够自动或手动运行。当制动实施时，控制器电路会自动运行。当牵引车慢下来，控制器内的传感器会进行减速动作并增大挂车制动力，这样提供平顺均衡的挂车制动力。对于手动操作，控制器装备有滑动控制装置，它能够激活驻车灯，制动，并随着控制装置进一步移动，在控制器面板前面的指示灯由暗变亮，表明制动力变大。

警告

这里有一些不同型号的制动控制器可以用，一些有运动传感器，一些没有。如果没有运动传感器的动控制器被用在挂车制动上将不能与牵引车匹配并在所有情况下不实现到平顺地制动。

如果需要在正确地选择控制器上获得进一步的帮助，请联系AL-KO。

控制器操作的更详细的信息包含在每一单元的安装指导里面。

需要更多的信息请联系本地AL-KO经销商或者直接联系AL-KO公司。

安装挂车制动器

正确地使用和调节挂车电制动，能够提供更多的平顺可靠地制动。

电制动器必须具有完整的电路，破损的或较差的电线连接可能阻止或妨碍电力流动，造成制动力差或无制动。

电制动为两个电磁体大约提供6.5安培电流。电路应当符合所有适配的电磁体需要的电流容量。

AL-KO公司建议所有的电气接头进行焊接或通过螺旋式插接件连接。

新挂车需要磨合，以达到最大制动性能。

在你的汽车和挂车间的适当的制动平衡

在你的牵引车上的制动系统是用来安全有效地进行刹车，同样的装在你的挂车上的电制动系统也是用来有效地刹住相应重量的挂车。

在牵引车和挂车上制动性能的平衡是很重要的，因此两者都不能超载。如果在两个的制动系统之间没有得到正确平衡，那么两个制动系统会过热，可能出现制动性能恶化。当挂车制动稍微超前牵引车的制动会获得正确的制动平衡。这可以通过调节牵引车里面的控制器来完成。当正确地进行调整，将不会感觉到挂车推动牵引车，也不会在制动的时候有过多的拖拽。

不正确的制动

挂车单独制动

牵引车单独制动

正确的制动

在一起作为一个制动系统

一般维护

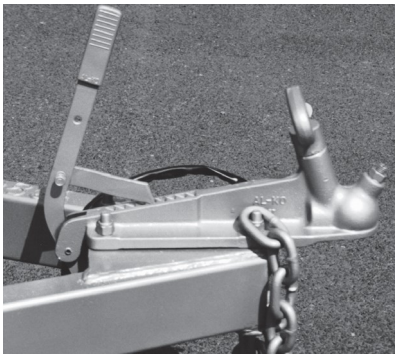
为了维护你的AL-KO制动系统安全可靠的刹车力，建议定期间隔对制动器进行维护。联系您本地AL-KO服务中心或制动系统的专业人士寻求帮助。

应当按期按下面所列一般维护条款维护检查。**<u>这是维修方法不是质保条款</u>**

1. 制动调节步骤

制动器与车轴或者AL-KO的独立橡胶悬挂系统在出厂前已经适配。制动器的清洁和调节应当在最初行驶300到1000公里，并按第8面建议的服务间隔进行。在制动底板背面有一个被保护帽盖住的小孔。当挂车车轮离开地面，转动星轮，（如下面所示），进行正确地制动调节。随着螺丝刀转动星轮直到转不动。然后反向转动星轮，使挂车车轮能自由地转动3/4到1圈。

驻车制动拉索调整



在装载情况下，驻车必须由制动杆提供安全制动力，推荐到牵引球后在连接器上第5或第6个凹口，不是靠近（见图）。

用这种方法调整拉索拉力失败，这将通过独立悬挂和带板簧直轴的悬挂的移动引起制动蹄部分地动作，出现制动器和制动鼓过热现象。如果调节不正确，持续使用，将首先引起从蹄（第二个制动蹄）过热使摩擦片分裂从而使制动性能衰退直到制动最终失效。

2. 制动鼓 / 轮毂

制动鼓应当按页12保养周期进行检查磨损情况。

* 如果制动鼓磨损严重或者磨损超过0.5mm，应当到AL-KO服务中心进行加工。

* 如果制动面直径超过最大允许值，应当进行更换。

* 经过加工的制动鼓必须彻底清洁和检查（通过AL-KO公司）。

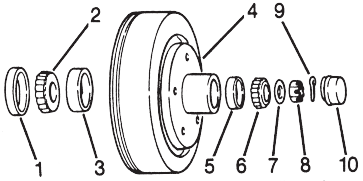
* 如果电磁体在制动鼓内侧磨损面磨损不均衡或者有很重刻痕，我们建议到我们所提到的AL-KO公司进行加工或者更换。

注意： 任何时候更换制动鼓时，必须安装新电磁体。

3. 轴承

轴承必须定期检查和润滑确保你的挂车能可靠、安全运行。我们建议你的挂车带到你本地AL-KO服务中心，在那里可进行正确轴承的维护。

如果你需要从你的挂车上拆下轮毂或制动鼓，下面的图显示组件的关系。



1-	油封	6-	外轴承
2-	内轴承	7-	轴垫圈
3-	内轴承杯	8-	轴螺母
4-	轮毂/制动鼓	9-	开口销
5-	外轴承杯	10-	轮盖

* 检查油封，如果发现有刻痕，撕裂或磨损则更换。
* 如果轴承破坏或磨损推荐到本地AL-KO服务中心进行更换。

注意：建议成套更换轴承和轴承杯。制造商零件号印在轴承杯和锥轴承上用于识别。

* 挂车上所有的轴承都需要用 高质量等级的轴承润滑脂进行润滑。
* 任何时候轮毂拆卸，轮轴承都必须进行调整。

调节轮轴承

当紧固槽螺母时，慢慢转动轮毂使轴承到位，直到拧紧。

松开槽螺母并再次用手（不用扳手）以手指力量，使第一个凹槽对准轴头上的孔并插入开口销。建议轴承调节由本地AL-KO服务中心进行，以保定正确的轴承调节。

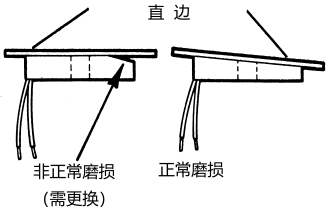
3. 摩擦片

定期检查摩擦片磨损和清洁油上脂，应该到你本 地的AL-KO服务中心进行。

* 如果摩擦片磨损到接受铆钉0.8mm，或者到粘贴摩擦片到最小有厚度1.5mm, 或者有不规则损坏，或来自外面的污染，制动蹄应该采用来自AL-KO服务中心原件进行更换。

4. 电磁体

电磁体可以不用从制动器上拆下就可以进行磨损检查，把一个比电磁体长的直边靠在上面，如下面所示。



电磁体正常磨损时可以继续使用，当摩擦单元里面白色塑料勉强可见时，则需要更换。对于越野用的产品，AL-KO专门开发了一款长寿命的电磁体。这个电磁体中心采用一个特殊的高科技塑料芯。

这个芯需要定期检查磨损情况。如果磨损严重或者间隙过大则需要更换。越野版电磁体没有用电磁体固定夹，我们建议安装时用橡皮筋固定到位，橡皮筋会在初次制动时消除掉。

可以在你的本地的AL-KO服务中心更换电磁体。

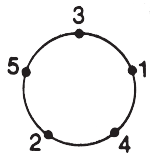
5. 安装车轮

保持适当的扭矩参数能保证车轮可靠安全地安装到制动鼓面，这是很重要的。

* 开始用手拧上所有的螺母，以避免错丝。
* 以交叉星式的方式紧固螺母。
* 任何时候更换和维修车轮，应当检查车轮螺母力矩。车轮螺母应当按车轮制造商规定的力矩紧固。请询问你的房车或挂车供应商得到正确的扭矩设定。用优质的扭力扳手来检查轮螺母力矩。

  推荐在最初行驶的400km时，每100km对轮螺母扭力进行检查，以后按页12进行定期地保养。

* 以星形交叉方式紧固车轮螺母如图示：



* 推荐车轮螺母力矩见下表：

螺栓	力矩
7/16 studs	80ft-lbs / 108nm
1/2 studs	100ft-lbs / 135nm
9/16 studs	140ft-lbs / 190nm
5/8 studs	175ft-lbs / 237nm
10mm studs	50ft-lbs / 68nm
12mm studs	100ft-lbs / 135nm
14mm studs	154ft-lbs / 209nm

保养周期列表

检查	方法	每天	每 5000 km或 6 个月	每 10000 km 或 12 个月	页面
挂车制动	检查制动功能是否有效	●			
气压	轮胎气压达到制造商参数要求	●			
轮螺母*	紧固到正确的扭矩		●		7
车轮钢圈	进行压痕，破坏，和不圆度的检查		●		
制动调节**	清洁，检查摩擦片磨损并调节			●	4
制动电磁体	不均匀磨损检查			●	7
轮轴承	检查轴承磨损和损坏并润滑			●	5
轮毂/制动鼓	检查大的刻痕和磨损			●	5
油封	检查损坏或磨损			●	6
摩擦片	检查摩擦片磨损和污染			●	6
驻车制动	检查和调整			●	

* 最初行驶的400km和每次车轮安装，每100km紧固车轮螺母。见页7。

** 最初300到1000km调整制器，然后按上面间隔要求。

故障检修指导

故障	原因	检查
无制动	没有电	接触不良 电路断开 电阻熔断 控制器设定
无制动	电磁体磨损	用AL-KO 正品配件更换
无制动	制动蹄间隙不正确	调节制动器
制动力弱	电路接头松动	检查所有接头
制动力弱	摩擦片磨损	用AL-KO正品配件更换
制动力弱	制动鼓磨损	加工，如果尺寸超差则更换
制动力弱	超载	减少挂车载荷
制动力弱	摩擦片污染	用正品件更换摩擦片和油封
制动断续	电磁体线圈断	检查并用正品配件更换
制动断续	电路接头松动	检查所有接头
制动断续	制动鼓不圆	重新加工制动鼓
制动断续	轴承松动	检查并调整轴承
制动锁住	控制器故障	检查，如必要则更更换
制动锁住	驻车灯连接进制动电路	检查控制器和挂车电路
制动锁住	制动器零件松动	检查铆钉松动，弹簧断裂等
制动锁住	轴承磨损	更换轴承 检查轮毂
制动锁住	制动鼓不圆	重加工制动鼓

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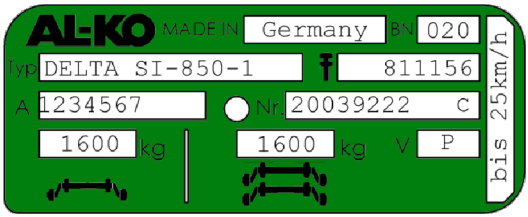
AL-KO挂车底盘的零配件服务：

定购零配件时，要给出详细的型号说明。

请把AL-KO小型挂车底盘的数据写在下面，以便利于得到正确的配件供应。



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