



## 智能称重货叉 iForks





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# 介绍 / NTRODUCTION

这份手册里包含了智能可计重货叉iForks的安装和使用。请仔细阅读该手册。安装人员必须阅读该手册的内容。严格按照手册的内容来执行。按正确的规则进行操作。该手册应置于安全和干燥的地方存放。用户可把Cascade RAVAS的手册准备一份新的副本以备手册顺坏或者丢失。 This manual describes the installation and use of the iForks. Read this manual carefully. The installer must be informed of the contents of this manual. Follow the contents of the manual precisely. Always do things in the correct order. This manual should be kept on a safe and dry place. In case of damage or loss the user may request a new copy of the manual from Cascade RAVAS.

#### 警告与安全措施 ////ARNINGS & SAFETY MEASURES

当使用智能称重货叉系统时,请仔细阅读该手册的说明和规则。每步的操作按顺序进行。如果对于任何 说明有不清楚的地方,请联系Cascade RAVAS。

- 所有应用于叉车的安全规则都是有效的而且是不可变更的。
- 当任何个人或者物体置于货物的边缘,周围和底部或者接近于货物时,禁止进行称重操作。
- 由于驾驶室内安装有显示器,所以Cascade RAVAS对于操作人员的任何肢体上所遭受的伤害不承担责任。
- 在任何作业完成之前, 如果系统有任何变动请从供应商处获得书面的许可。
- 购买者的唯一职责是对他们的员工进行培训,以合理使用该设备并对其进行维护保养。
- 在您还未完全掌握该设备的性能时,请勿使用该设备。
- 定期观察显示器以防止出错。
- 只有经过培训和授权的人员才可以对显示器进行维护。
- 必须严格安装卡斯卡特操作指南,维修手册以及安装说明进行操作,如果有疑问请咨询供应商。
- 对于因称重操作不当或者非精确称重所造成的错误,Cascade RAVAS不承担责任。

When using the iFork, please observe carefully the instructions and guidelines contained in this manual. Always perform each step in sequence. If any of the instructions are not clear, contact Cascade RAVAS.

- All safety regulations that apply on the truck remain valid and unchanged.
- No weighing operations are allowed if any persons or objects are in the vicinity; around, under or close to the load.
- Cascade RAVAS is not responsible for any physical harm done to the operator because of the presence of the indicator in the cabin.
- Any modifications done to the system must be approved in writing from the supplier, prior to any work being completed.
- It is the sole responsibility of the purchaser to train their own employees in the proper use and maintenance of this equipment.
- Do not operate this unit unless you have been fully trained of its capabilities.
- Check the accuracy of the scale on a regular basis to prevent faulty readings.
- Only trained and authorized personnel are allowed to service the scale.
- Always follow the operating, maintenance and repair instructions of this truck and ask the supplier when in doubt.
- Cascade RAVAS is not responsible for errors that occur due to incorrect weighings or inaccurate scales.



若您在阅读完该手册后还有任何问题,请联系Cascade RAVAS。

Should you have any further questions after reading this manual then you can contact Cascade RAVAS.



仔细阅读 READ CAREFULLY 备件清单 P ARTS LIST



#### 非NTEP认证的标准叉尖 Non-NTEP Approved-Standard Tip

序列号	数量	L=762mm <u>(30 in.)</u> 零件号	L=813mm <u>(32 in.)</u> 零件号	L=914mm <u>(36 in.)</u> 零件号	L=1050mm <u>(41.3 in.)</u> 零件号	L=1067mm <u>(42 in.)</u> 零件号	描述
REF	QTY	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	DESCRIPTION
1	1	23A-WFE-A001	23A-WFE-A005	23A-WFE-A007	23A-WFE-A013	23A-WFE-A015	称重货叉一对 iForks Assembly, Pair
2	2	6151321	6155378	6155379	6151325	6155380	叉套 Fork Cover
	1						
序列号	数量	L=1219mm <u>(48 in.)</u> 零件号	L=1372mm <u>(54 in.)</u> 零件号	L=1524mm <u>(60 in.)</u> 零件号	L=1829mm <u>(72 in.)</u> 零件号		描述
序列号 REF	数量 QTY		(54 in.)			DE	描述 SCRIPTION
		(48 in.) 零件号	<u>(54 in.)</u> 零件号 PART NO.	(60 in.) 零件号 PART NO.	(72 in.) 零件号 PART NO.		

2

#### 备件清单 **D**ARTS LIST

NTEP认 NTEP App		隹叉尖 andard Tip					
		L=762mm	L=813mm	L=914mm	L=1050mm	L=1067mm	
序列号	数量	(30 in.)	(32 in.)	(36 in.)	(41.3 in.)	(42 in.)	描述
		零件号	零件号	零件号	零件号	零件号	
REF	QTY	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	DESCRIPTION
1	1	23A-WFE-A501	23A-WFE-A505	23A-WFE-A507	23A-WFE-A513	23A-WFE-A515	称重货叉一对 iForks Assembly, Pair
2	2	6151321	6155378	6155379	6151325	6155380	叉套 Fork Cover
		1 1010	1 1070	1 1524	1 1020		
序列号	数量	L=1219mm	L=1372mm	L=1524mm	L=1829mm	描述	
177 27 5	奴里	(48 in.) 零件号	<u>(54 in.)</u> 零件号	<u>(60 in.)</u> 零件号	<u>(72 in.)</u> 零件号	-	油江
DEE	QTY					+	
REF		PART NO.	PART NO.	PART NO.	PART NO.		<b>DESCRIPTION</b> 对 iForks Assembly,Pair
2	2	23A-WFE-A523 6155381	23A-WFE-A53 <sup>2</sup> 6155382	6155383	6155384	3 你重页文 又套 Fork Co	
		皆状叉尖 d-Chisel Tip					<b>I</b>
승지 다	粉目	L=762mm	L=813mm	L=914mm	L=1050mm	L=1067mm	+# \#
序列号	数量	(30 in.)	(32 in.)	(36 in.)	(41.3 in.) 電供日	(42 in.)	描述
555	071	零件号	零件号	零件号	零件号	零件号	
REF	QTY	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	DESCRIPTION 形言化习
1	1		23A-WFE-A105				称重货叉一对 iForks Assembly,Pair
2	2	6155578	6155587	6155588	6155582	6155589	叉套 Fork Cover
		L=1219mm	L=1372mm	L=1524mm	L=1829mm		
序列号	数量						描述
序列号	数量	L=1219mm <u>(48 in.)</u> 零件号	L=1372mm <u>(54 in.)</u> 零件号	L=1524mm (60 in.) 零件号	L=1829mm (72 in.) 零件号	-	描述
序列号 REF	数量 QTY	(48 in.)	(54 in.)	(60 in.)	(72 in.)	_	描述 DESCRIPTION
			<u>(54 in.)</u> 零件号	(60 in.) 零件号 PART NO.	(72 in.) 零件号 PART NO.		DESCRIPTION <sup>对</sup> iForks Assembly,Pair

NTEP认证的标准叉尖 NTEP Approved-Standard Tip

ſ	序列号	数量	L=762mm <u>(30 in.)</u> 零件号	L=813mm <u>(32 in.)</u> 零件号	L=914mm <u>(36 in.)</u> 零件号	L=1050mm <u>(41.3 in.)</u> 零件号	L=1067mm <u>(42 in.)</u> 零件号	描述
	REF	QTY	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	DESCRIPTION
	1	1	23A-WFE-A601	23A-WFE-A605	23A-WFE-A607	23A-WFE-A613	23A-WFE-A615	称重货叉一对 iForks Assembly, Pair
	2	2	6155578	6155587	6155588	6155582	6155589	叉套 Fork Cover



序列号	数量	L=1219mm <u>(48 in.)</u> 零件号	L=1372mm <u>(54 in.)</u> 零件号	L=1524mm <u>(60 in.)</u> 零件号	L=1829mm <u>(72 in.)</u> 零件号	描述
REF	QTY	PART NO.	PART NO.	PART NO.	PART NO.	DESCRIPTION
1	1	23A-WFE-A623	23A-WFE-A631	23A-WFE-A639	23A-WFE-A653	称重货叉一对 iForks Assembly, Pair
2	2	6155590	6156739	6156740	6156741	叉套 Fork Cover

	公共件 Common Parts						
序列号	数量	零件号	描述	序列号		零件号	描述
REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
3	2	6155687	可充电电池组 Rechargeable Battery Pack	17	8		螺栓 Capscrew
4	6	6155833	内六角螺栓M6×8 C/S-HS	18	4	763025	螺母M12 Nut
5	2	6151565	电池固定座 Battery Holder	19	4		双面胶带 Double Sided Tape
6	2	6150907	货叉 Fork	20	2	767961	外六角螺栓M8×16 C/S-HH
7	1		感应测头 Load Sensor	21	4	212273	螺母M5 Nut
8	2	6152414	传感器 Load Cell	22	4	768781	内六角螺栓M5×16 C/S-HS
0	1	6155696	发射器-1 Transmitter-1	23	4	6155836	内六角螺钉M12×55 C/S-HS
9	1	6155891	发射器-2 Transmitter-2	24	2	787384	锁紧螺母M5 Lockwasher
10	1	6151341	右盖板 Cover Plate,RH	25	8	6156029	平垫圈M5 Washer
10	1	6151342	左盖板 Cover Plate,LH	26	8	6155847	公差环 Tolerance Ring
11	8	787375	内六角螺栓M8×20 C/S-HS	27	4	6156019	叉尖警示贴 Tip Sticker
12	1		可调节基座 Indicator Mount	28	2	6155828	平垫圈M12 Washer
13	1	6155854	显示器安装支架 Bracket		1	6156463	电源12V Power Supply,12V
14	1	6155856	显示器 Indicator		1	6156464	电源转换器24V-48V Power Converter,24V-48V
15	1	6155692	充电器组(包含项目3) Charger Group(Includes item3)		1		打印机 Printer
16	4		销轴 Spool		1	6156465	蓝牙数据传输 Bluetooth Data Transfer



# 系统设置 S YSTEM SETUP

#### 安装电池组 Placing the battery packs in the iForks

1 提起电池固定座上的锁紧扣板。
2 将电池组分别装在货叉上。
3 将电池组扣紧在电池固定板上。
4 推下锁紧扣板以确保电池组件安装牢固。

Lift up the locking clips on the battery holders.
Position the battery packs in both forks.
Click the battery packs into the battery holders.
Push the locking clips down to secure the battery packs.



开启系统 Switching on the iForks



1 按下位于电池组固定座边上的蓝色按钮以启动货叉组件。 Switch on the forks by pressing the blue buttons on both battery pack holders.

2 位于货叉上的蓝色LED灯开始自动闪烁。 The blue LED's on the iForks will start blinking automatically.



关闭系统 Switching off the System



### 电池充电 C HARGING BATTERIES

低电量显示 Low Battery Indication iForks

可更换电池组移对货叉系统供电。

当电池组的电量快耗尽的时候,显示器指示灯将会亮起,同时相关货叉的指示灯 —— "F1", "F2"或者两者同时闪烁。 相关货叉上的蓝色LED灯将会缓慢地开始闪烁(每10秒钟闪烁2次)。货叉系统将会在10分钟后自动关闭。

Exchangeable battery packs supply power to the iForks .

When the voltage level of the battery packs is running low, the low bat indicator will light up and the pointer of the relating fork - "F1", "F2" or both - will start blinking in the display. The blue LED's on the relating fork will start blinking very slowly (twice every 10 sec). The iForks will switch off automatically after 10 minutes.



蓝色LED灯功能介绍 FUNCTIONALITY BLUE LED				
	亮5秒钟 ON for 5 sec.			
电量充足 FULL BATTERY	间断闪烁 Blink Time Interval			
工作模式 Working Mode	每1.5秒闪烁一次 Once every 1.5 sec.			
休眠模式 Sleep Mode	每4秒闪烁一次 Once every 4 sec.			
电量不足 Low BATTERY				
工作模式 Working Mode	每10秒闪烁一次 Once every 10 sec.			
休眠模式 Sleep Mode	每10秒闪烁一次 Once every 10 sec.			



#### HARGING BATTERIES



- 2 更换电池组中的电池(4节1号电池)
  - A 卸下6根十字槽头螺栓M3×25。
  - B 取下电池组安装盒端盖。
  - C 取出电池。
  - Change the D-Cells inside the battery packs
  - A Remove the 6 Phillips-head screws M3 x 25. B Remove the top housing of the battery pack.





电池充电

#### HARGING BATTERIES

3 每个电池组中装有4节充足电量的电池。重新盖上电池组安装盒的 端盖并将6根十字螺栓M3×25锁紧。

Place 4 full D-cell batteries in each batterypack. Replace the top housing of the battery pack and tighten the 6 Phillips-head screws M3 x 25 (not to tight).



- 4 重新将电池组安装到称重货叉上。 Replace the battery packs of the iForks
- 5 **若电池是可充电式的,可对其**进行充电。(可选项) Charge the rechargeable battery packs (option).

系统可额外配备可充电电池组以及一个充电器。对电池至少充电8小时。这将有助于减少电量的损失。请阅读电池组上的标签以确认该电池组与充电器匹配。只有带可充电电池的电池组才可充电。

The system additionally can be equipped with rechargeable battery packs and a charger. Charge the battery for at least 8 hours. This will prevent loss of battery capacity. Check by reading the battery-pack label to make sure this battery pack is equipped with rechargeable batteries. Only battery packs with rechargeable D-cells can be re-charged.



首先将电池组装到充电座上,然后将插头插入插座中进行充电。当电池在充电时, 充电器上的红色指示灯会发光。在至少充电8小时以后,电池组将会重新被充满。 当充电完成时,此时的红色指示灯仍然会亮。另外,需注意的是,在进行充电时, 充电器的电压与提供电源相适配。

First position the battery pack inside the charger module, then plug the adaptors into the mains voltage. When the battery is being charged, the red LED on the charger is lit. After at least 8 hours charging, the battery packs are full again. The red LED will stay on, even when the battery packs are fully charged.

### 电池充电 C HARGING BATTERIES

更换显示器电池

Changing the Indicator Batteries

显示器标配的是4节5号电池。可选择将显示器连接到叉车的电池上作为电源。这必需另外提供,因为显示器的电压需要由交流稳压 面板上的电压转换器来提供。

As standard, the indicator is equipped with 4 AA batteries. Optionally the power supply of the indicator can be wired from the truck's batteries. This has to be ordered separately because the indicator has to be supplied with the appropriate voltage converter of voltage stabilizer board.







#### 称重之前请清零 Check Zero Reading before Weighing



#### 在称重前请清零

在称重前,有必要确保系统处于空载并且与其他障碍物无接触的状态

如果显示器无法自动显示零值,请通过人工的方式,短时间按" >0< "键以进行清零

Check the zero reading before each weighing!

Before each weighing it is necessary to check if the system in without a load and does not make contact with other obstacles

When de indicator doesn't show automatically the zero, then a manual zero correction has to be done by pressing short on the key: >0<



水平面校正(可选项) Level Correction (option)



#### 使用 *U* SE

设定蓝牙连接并称重 Establish Bluetooth Communication and Weight





自动关闭显示器 Auto Shut-off Indicator





使用 **し**SE



显示功能 Display Functions	
$\sim$	称重系统(包括货物)处于稳定状态 the weighing system (including load) is stable
	称重结果显示负值 the weight shown is negative
0值 ZERO	称重结果位于零值范围内 the weight shown is within the zero range
净重   ◀ NET	显示结果表示净重值 the display is showing the net weight
e1 <b>V</b>	显示的称重值位于范围1内(有多个范围值可供选择) displayed weight shown is in range 1 (option multi range)
e2 🗸	显示的称重值位于范围2内(有多个范围值可供选择) displayed weight shown is in range 2 (option multi range)
e2 🗸	显示的称重值位于范围3内(有多个范围值可供选择) displayed weight shown is in range 3 (option multi range)
F1 <b>V</b>	货叉1/启动设定值1(可选择替换输出) Fork 1 / setpoint 1 is activated ( option relay output)
F2	货叉2/启动设定值2(可选择替换输出) Fork 2 / setpoint 2 is activated ( option relay output)
kg	所显示的称重值单位为公斤 displayed shows weight is kilograms
lb	所显示的称重值单位为磅 displayed shows weight is pounds
pcs	所显示的数量代表在称重装置上货物的数量 number displayed represent number of pieces on the scale
	表示显示器电量低 low bat indicator

		每个按键有两种操作功能以及一个 Each key has 2 operational and one entry fur	
标准功能(快速按键) Standard function (Short key press)	按键 Key	特殊功能(长时间按键) Special function (long key press)	数值输入功能(输入代码) Value entering function (entry mode)
零值设定 Zero setting	ID代码 ID CODE	输入代码 Code entry	输入 Enter
自动设置皮重 Automatic tare	PT - > T - > - >	预设置皮重 Pre-set tare	减少输入数值的闪烁 Decrease the value of the digit flashing
打印计重值并附带总计值 Print weight and add to the total	总计 TOTAL	校核部分求和值并打印总计值 Check subtotal and print total	增加输入数值的闪烁 Increase the value of the digit flashing
抽样计重 Sampling a piece weight	件数 PCS 	输入单件货物重量 Enter a piece weight	切换到位于左边的下一组数字 Shift to the next digit on the left
开启并实现在磅和公斤间 进行切换 On switch and change to lb and kg	公斤/磅 <b>亞</b> KGLB	关闭 Off switch	清零 Clear entry

#### 重要说明

只有当称重系统位于稳定状态时,对按键的操作才能被执行(系统指示灯会亮)。这意味着,只有当货物位于稳定状态时,显示器才能执行指令。

#### Important

Operation of a key is not accepted unless the weighing system is stable (and the "load stable" pointer lights up). This means that the indicator only executes commands with a stable load.

错误信息 Error Messages						
显示 Display	含义 Meaning	新出错误代码 Out of error mode				
Err01	称重测头信号不稳定 Load cell signal is unstable	自动输出 Automatic				
Err02	称重装置过载 Overload on full scale	在取走多于货物后自动输出 Automatic after removing weight				
Err03	毛重显示为负值。这样的操作不允许	自动输出 Automatic				
	Gross negative. This action is not allowed					
Err04	超出零值范围 Out of zero range	按任何按键 Press any key				
Err05	样品精度太低 Sampling accuracy too low	按任何按键 Press any key				
Err06	输入信号频率太高 Input signal too high	校正后自动输出 Automatic after correcting put				
Err08	标定超出范围(负数)Calibration out of range(negative)	自动输出 Automatic				
Err09	标定超出范围(信号频率太低) Calibration out of range(signal too low)	自动输出 Automatic				
Err10	标定第二点(第三点)数值低于第一点(第二点)数值 Calibration count 2nd(3rd) point lower than count 1st(2nd) point	自动输出 Automatic				
Err14	不允许设定值2<设定值1	自动输出 Automatic				
Err97	称重数据的有效性:禁止操作	如想要操作,安装跳线(注意:完成这个操作后,有必 系统进行新的标定以及标注) Wh				
EII97	Legal for trade version:not allowed action	action is intended, install jumper JP1(attention: after this action a complete new calibration and stamping of the system is necessary)				
Err98	标定值必须高于先前的数值 Calibration point must be higher than previous one	自动输出 Automatic				
Err99	只有在系统启动时才可以操作 Action only allowed in startup units	自动输出 Automatic				
ErrF1	货叉1故障(无讯息)Problem with fork1(no communication)	重启显示器。重启货叉系统&显示器 Restart indicator.Restart forks & indicator				
<b>F</b> == <b>F</b> 2	货叉2故障(无讯息)Problem with fork2(no communication)	重启显示器。重启货叉系统&显示器 Restart indicator.Restart forks & indicator				
ErrF2	称重侧头信号为负值 Load cell signal negative	从地上提升起货叉 Lift up the forks from the ground				
L	が並属久信与外以值 Load cell signal negative 货叉有倾斜角(仅限于合法转换场合) Forks are out of level(only legal for trade version)	把货叉置于水平位置 Put the forks into horizontal position				
ErrCs	校核传感器故障 Problem with correction sensor	请联系卡斯卡特服务维修部				
	显示器电量为空 Battery of indicator is empty	Contact the Cascade Service department 更换4节五号电池 Replace the 4 AA batteries				
		更换两个电池组电池或者对电池组进行充电				
► +F1 ▼	货叉1的电量为空 Battery of fork 1 is empty	Replace the D cells in both battery packs or charge both battery pa				
	货叉2的电量为空 Battery of fork 1 is empty	更换两个电池组电池或者对电池组进行充电				
► <sup>3</sup> +F2 ▼	スヘ2中1 電車/11上 Battery OF TOTK T IS empty	Replace the D cells in both battery packs or charge both battery pa				
	显示信息 Display Me					
显示 Display	含义 Meaning					
BltF1	货叉1成功地连接上蓝牙 Successful Bluetooth link with fork 1	无错误信息 No error				
BltF2	货叉2成功地连接上蓝牙 Successful Bluetooth link with fork 2	无错误信息 No error				

使用 **U** 如何称重(包括净重/皮重/毛重)

Net / Tare / Gross Weight 解释:净重(1)+皮重(2)=毛重(3) EXPLANATION: Net(1) + Tare(2) = Gross(3)



净重: 自动称皮重 Net Weighing: Automatic Tare







#### 





净重: 手动称皮重-按PT键 Net Weighing: Manual Tare-PT (continued)









#### 公斤与磅的切换

KG – LB Switch



显示器显示"1000公斤"

按住如图示的"切换"键5秒钟,切换成"2205磅"



使用 // SE 用户自行设定(待续) User Settings (continued) 设置显示器自动关闭的时间(延时几分钟) Set the auto shut-off time indicator (delay time in minutes) WW A\_off ----Ú ///////  $( \bigoplus)$ >T< **>** 0表示显示器始终开启 0 min = indicator always on 设置背光灯(光的强度按百分比来表示) Set backlight (intensity in %) ĪŠ Ight 100 Ľ 4 ▼
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●  $\cap$ 0代表关闭背光灯 0 % = backlight off



使用

// <u>SE</u>

定期维护保养

#### **ERIODIC MAINTENANCE**

#### 2000小时

叉车在工作2000小时后,需在12个月内间歇性地 对货叉进行检修(单侧替换操作)或发现任何缺陷 以及变形。从严适用原则需要更多检测项目。

#### 观测货叉的挂钩和货叉架间隙

**注意:**用标准样板(二级209560或者三级209561) 能通过/不能通过货叉下钩和货叉架的间隙来判 定间隙是否合格。

- A 观测货叉的下钩和货叉架. 如果样板可以通过, 按 需要维修或更换之。
- B观测上横梁.如果样板中的标箭号的地方接触横梁处,按需要维修或更换之。
- C观测货叉上钩.如果样板标箭号处接触上钩,按要 求维修或更换之。

#### 2000-Hour

After 2000 hours of truck operation, forks in use shall be inspected at intervals of not more than 12 months (for single shift operations) or whenever any defect or permanent deformation is detected. Severe applications will require more frequent inspection.

Inspect fork hooks and carriage bar clearance

NOTE: Use go/no-go Wear Gauge Part No. 209560(Class II) or 209561 (Class III).

- A Inspect the fork lower hooks and carriage bar. If the gauge fits between the carriage bar and lower hook, repair or replacement is needed.
- B Inspect the upper carriage bar. If the gauge arrow touches the carriage bar, repair or replacement is needed.
- C Inspect the fork upper hooks. If the gauge arrow touches the hook, repair or replacement is needed.



# 安全操作和维护 S AFE OPERATION AND MAINTENANCE (OSHA REGULATIONS)

符合OSHA规则一工业车辆和属具(详见OSHA1910.178)

警告:本工业车辆安全操作和维护规则遵循 OSHA1910.178和ANSI B56.1-1969工业车辆 安全标准。当操作和维护安装有属具的叉车时 您要特别注意这些规则的如下部分。您应熟悉 这些规则的所有部分。不明之处请向您的上级 询问。

#### (a)常规要求

(4)除非预先得到书面许可,用户无权擅自更改和添加影响作业能力 和操作安全的操作。

(5)如果用户自行在叉车上安装属具而不通过厂家安装,用户将被要 求对叉车进行标注以区别于属具,并标明在货物载荷中心夹持并举升到 最大高度时叉车 / 属具准确的综合载重量。

(6)用户在维护时应能看到所有铭牌和标签清晰明了。

#### (e)安全规则

(2)如果货物堆放形式不合安全规范,用户应根据如下(a)(2)要求 给叉车加装竖式挡货架。

(a)(2)所有1972年2月15日以后用户购买的叉车的设计和结构必须符合降下货物,挂空挡,关闭发动机并拉上制动刹车手柄。 由ANST制定ANSI B156.1-1969工业车辆部件 II 标准。 (6)在任何装卸码头或载重卡车作业时都应使叉车与

只有经过培训和授权的操作者才可以驾驶叉车。在叉车安 全培训时应为培训人员制订相关规程。

#### (m)叉车驾驶

(1)叉车不允许朝工作台或其他固定物体前的站立者行进。

(2)叉车举升时无论空载还是载货时都不允许有人站在货叉 下方或从货叉下方经过。

(3)未经授权的人员不允许驾驶叉车,用于安全驾驶叉车的场地亦须得到许可。

(4)不允许将手臂或脚伸到门架之间或行进着的叉车外。

(5i)当叉车载着货停放时,货物应尽量完全放低。控制杆应 挂空挡,关闭发动机并拉上制动刹车手柄。如果叉车停在斜坡上 还应用块状物挡住车轮。

(5ii)叉车在以下情况属无人看管状态:操作者远离叉车7.6米 以上(即使在视野以内),或任何时候操作者离开叉车并不在视 野范围内。

(5iii)当操作者离开叉车并在7.6米的视野范围内时,应先完全 <sub>预合</sub>降下货物,挂空挡,关闭发动机并拉上制动刹车手柄。

(6)在任何装卸码头或载重卡车作业时都应使叉车与斜坡或平 台保持一定的安全距离。叉车不能用于开闭门。

#### (I)操作人员培训

# 安全操作和维护 S AFE OPERATION AND MAINTENANCE (OSHA REGULATIONS)

(10)无论是否需要都应加装挡货架,以尽可能减小货物或部分货物向后 掉落的可能性。

#### (n) 行进

(4)驾驶员经过十字路口或其他影响视野的障碍物时应慢速行 驶并鸣笛。如果货物搬运时前方视线被挡,驾驶员应采用倒 退搬运。

(7i)当斜坡坡度超过10°时, 叉车装载行驶时须使货物相对叉车而言 处于坡度上方(即上坡时叉车向前行驶,下坡时叉车倒退行驶。)

(7iii)在坡上行驶时, 叉车门架尽可能后倾, 并提升必要的高度以保 证货物运输安全。

#### (o)装货

(1)只允许搬运包装稳定或安全的货物。在搬运载荷中心不对中的货物时须小心谨慎。

(2)只允许搬运叉车承载能力范围内的货物。

(3)当货物尺寸过长或过高(包括多层货物)而影响承载能力时,必须调整货物。

(4)操作安装上属具的叉车,即使不夹持货物,也应把它看成搬运了 一定重量(非满载)货物。

(5)须小心地后倾门架以保证货物稳定性。

(6)货物前后倾时要格外小心,特别是高层堆垛时。货物提升时 不能同时前倾,除非叉起货物时。提升货物至堆垛货物上方 时再前倾。当堆垛多层货物时,应尽量后倾以保证稳定性。

#### (p)叉车操作

(1)任何时候发现叉车处于须维修、有缺陷或任何不安全隐患的 情况,叉车必须停下来维修直到可重新安全工作。

#### (q)叉车维护

(1)任何存在不安全操作隐患的叉车都应该返修。所有维修工作 应由经授权的人员完成。

(5)叉车上所有待维修更换的部件都只能用标准更换件更换以确 保叉车保持出厂时的安全使用状态。

(6)未经授权不得对叉车擅自改动以避免和出厂时众多部件原有 位置不符。也不允许用即使制造商原先没提供的额外部件进 行更换或减少任何配件。除非得到叉车制造商的许可,否则 不得对叉车超载作业。

(7)叉车投入使用前应先检查,如果检查显示任何对叉车操作不 安全的迹象时都不可投入使用。这样的检查至少应每日进 行。如果叉车是24小时不间断工作,那么每次换班时需例 行检查。发现毛病时应立即上报并更正。

# 安全操作和维护 S AFE OPERATION AND MAINTENANCE (OSHA REGULATIONS)

WARNING: The safe operation and maintenance of industrial trucks is regulated by Occupational Safety and Health(OSHA) regulations 1910.178 and American National Standards Institute(ANSI)Safety Standard for Powered Industrial Trucks, ANSI B56.1-1969. When operating and maintaining industrial trucks equipped with attachments you should pay particular attention to the following sections of these regulations. You should be familiar with all sections of these regulations. Ask your employer for the complete regulations.

#### (a) General Requirement

(4) Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturers prior written approval. Capacity, operation and maintenance instruction plates, tags or decals shall be changed accordingly.

(5) If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the appropriate weight of the truck and attachment combination at maximum elevation with load laterally centered.

(6) The user shall see that all nameplates and markings are in place and maintained in a legible condition.

#### (e)Safety Guards

(2) If the type of load presents a hazard, the user shall equip fork trucks with a vertical load backrest extension in accordance with (a) (2)following. (a) (2)All new powered industrial trucks acquired and used by an employer after February 15,1972 shall meet the design and construction requirements for powered industrial trucks established in the "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", except for vehicles intended primarily for earth moving or over -the-road hauling..

#### (I)Operator Training

Only trained and authorized operators shall be permitted to operate a powered industrial truck. Methods shall be devised to train operators in the safe operation of powered industrial trucks.

#### (m)Truck Operations

(1) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.

(2) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.

(3) Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.

(4) The employer shall prohibit arms or legs from being palced between the uprights of the mast or outside the running lines of the truck.

(5i) When a powered industrial truck is left unattended, load engaging means shall be fully lowered,controls shall be neutralized,power shall be shut off and brakes set.Wheels shall be blocked if the truck is parked on an incline.

(5ii) A powered industrial truck is unattended when the operator is 25 feet or more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view.

(5iii) withinWhen the operator of an industrial truck is dismounted and within 25 feet of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized and the brakes set to prevent movement.

## 安全操作和维护 S AFE OPERATION AND MAINTENANCE (OSHA REGULATIONS)

(6) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock or platform or freight car. Trucks shall not be used for opening or closing freight doors.(10) A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.

#### (n)Travelling

(4) The driver shall be required to slow down and sound the horn at cross isles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.

(7i) When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.

(7ii) On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.

#### (o)Loading

(1) Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered.

(2) Only loads within the rated capacity of the truck shall be handled.

(3) The long or high(including multiple-tiered)loads which may affect capacity shall be adjusted.

(4) Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.

(5) A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.

(6) Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with

load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack . When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

#### (p)Operation of the Truck

(1) If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.

#### (q) Maintenance of Industrial Trucks

(1) Any power-operated industrial truck not in safe operating condition shall be removed from service.All repairs shall be made by authorized personnel.

(5) All parts of any such industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.

(6)Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts.Additional counter-weighting of fork trucks shall not be done unless approve by the truck manufacturer.

(7) Industrial trucks shall be examined before being placed in service and shall not be placed in service if the examination shows any condition adversely affecting the safety of the cehicle. Such examinations shall be made at least daily. When industrial trucks are used on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected.



感谢您选用卡斯卡特(厦门)叉车属具有限公司产品。为了充分保障您的权益,请认真阅读本质量保证政策。

以下:"卡斯卡特(厦门)公司"指卡斯卡特(厦门)叉车属具有限公司;"购买商"指直接与卡斯卡特(厦门)公司签订产品购销合同的 叉车主机厂或获得叉车主机厂授权的代理商。

卡斯卡特(厦门)公司:保证其产品符合卡斯卡特(厦门)公司所提供的有效的产品购销合同、报价单、产品手册中所列有关性能参数的要求。

卡斯卡特(厦门)公司全新产品:包括属具、货叉、卷管器和配件,质量保证期为卡斯卡特(厦门)公司货交第一承运人之日起24个月 或该产品使用4000小时。以上述两项中先到期限者为准。

卡斯卡特(厦门)公司绿萌系列再制造产品:质量保证期为卡斯卡特(厦门)公司货交第一承运人之日起6个月或该产品使用1000小时。 以上述两项中先到期限者为准。

本政策中,"质量保证"的含义是:卡斯卡特(厦门)公司将对于获得其书面授权人员检查后确认在材料或制造工艺方面存在缺陷的任何零 部件进行修理或更换。

购买商、最终用户应做到:

1.在对卡斯卡特产品进行安装、调试、使用和保养时,必须严格按照相关的卡斯卡特安装说明书、检测规范、操作指南和维修手册 的规定进行操作。

2.只有在获得卡斯卡特(厦门)公司的书面授权后,方可对所购的卡斯卡特公司产品进行修理,但不能拆除或更换产品上的零部件。
任何在未经卡斯卡特(厦门)公司书面授权的情况下对卡斯卡特产品所作的修理、改动,或使用非卡斯卡特(厦门)公司原厂提供的零部件,或违反卡斯卡特安装说明书、检测规范、操作指南和维修手册中的有关规定,都将导致失去享受本质量保证政策的权利。

质量保证政策 WARRANTY

注意事项:

1.卡斯卡特(厦门)公司对于使用其产品进行超出该产品适用工况的特殊作业导致的产品损坏或任何非正常状况不 予保修。

2.当购买商或最终用户已拥有或虽未拥有但已开始使用本公司产品后,发生的该产品丢失、该产品使用中对人身或 财产造成损失或损害(包括间接损失或损害),卡斯卡特(厦门)公司均不承担责任。

3.产品正常使用中的磨损、消耗、未按卡斯卡特(厦门)公司操作指南而进行非正常使用、以及正常或定期的维护保养工作,不享受本质量保证政策。

4.超出本质量保证政策内容及卡斯卡特(厦门)公司购销合同上所述的产品相关条款外的情况,均不享受本质量保证政策。

最终用户如果需要进一步了解卡斯卡特(厦门)公司产品或安装及修理方面的事宜,请首先向售出该产品的叉车主机厂 或其代理商咨询。

卡斯卡特(厦门)公司也非常乐意解答您在这方面的任何问题。

请治:卡斯卡特(厦门)叉车属具有限公司服务与配件处 电话:40088 57315

本质量保证政策自2013年9月24日起生效。在新的质量保证政策颁发前,本政策一直有效。卡斯卡特(厦门)公司保留对 本政策进行修改的权利,届时恕不一一通知。请注意本政策页面下端的版本号。

Version No.: Cascade Xiamen 2013



Thank you very much for your purchasing Cascade products, in order to fully guarantee your rights and interests, please read the content of this Warranty carefully.

In this article, hereafter, "Cascade Xiamen" means Cascade Xiamen Forklift Truck Attachment Co., Ltd.;"Buyer" means the forklift truck OEM (Original Equipment Manufacturer) or its authorized Dealer who signs purchasing contract with Cascade Xiamen directly for its product.

**Cascade Xiamen**: warrants its products to conform to published specifications as found in its valid sales contracts, quotations, brochures, price lists.

**Cascade Xiamen New Products: consisting of attachments, forks, hose reels and service parts** are warranted for 24 months following the date of delivery to the primary carrier, or 4000 hours of operation, whichever terminates first alternatively.

**Cascade Xiamen Remanufactured Products:** are warranted for 6 months following the date of delivery to the primary carrier, or 1000 hours of operation, whichever terminates first alternatively.

Within the policy, "Warranty" means Cascade Xiamen will repair or replace, at its option, any part that a Cascade Xiamen itself or authorized inspection reveals to be defective in materials or workmanship.

#### What Buyers and Customers must do:

 To preserve Cascade Xiamen's Warranty, Buyers and Customers must carefully follow applicable Cascade Installation Instructions, Service Manuals and Operator Guides when installing, adjusting, maintaining and operating Cascade equipment.
Buyers, Customers must obtain Cascade Xiamen written authorization for repairs other than removal or replacement of defective parts.

Any unauthorized repairs or alterations, use of parts not provided by Cascade Xiamen, or failure to follow Cascade's Installation Instructions, Service Manuals and Operator Guides will result in loss of Warranty.



Notice:

1.Cascade Xiamen does not warrant that its products will perform any particular task which conditions are not suitable for the product.

2.Cascade Xiamen assumes no responsibility for loss, damage or injury to persons or property, or for consequential damages, resulting from the possession or use of its products.

3.Cascade Xiamen's Warranty does not cover wear, tear, abnormal applications which fail to follow Cascade Xiamen product Operator's Guide properly, normal or scheduled maintenance.

4.THERE ARE NO WARRANTIES EITHER EXPRESS OR IMPLIED INCLUDING ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE WHICH EXTEND BEYOND THOSE STATED IN THIS WARRANTY AND THE PRODUCT DESCRIPTION ON THE FACE OF CASCADE XIAMEN'S ORDER ACKNOWLEDGEMENT.

If the end user customer would like to know more about Cascade Xiamen product or the relevant aspects of installation and service, please firstly consult with the forklift truck OEM or its Dealer who sold the product.

Cascade Xiamen is also very happy to answer any of your questions on this. Please contact: Service and Spare Parts Department, Cascade Xiamen Forklift Truck Attachment Co., Ltd. Phone: 40088 57315

This Warranty's effective since September 24, 2013. Its validity remains until being superceded by a later version. Cascade Xiamen reserves all the rights of amendment without notice. Please note the Version No. at the bottom of this page.

Version No.: Cascade Xiamen 2013

#### 卡斯卡特(厦门)叉车属具有限公司 Cascade Xiamen Forklift Truck Attachment Co., Ltd

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