

After Sales Service Market of Shanghai

by Chen Ding Wu
EV Sale & Service Co., Ltd.

上海電動車 售後服務市場

陳定武

易維電瓶維護有限公司

The after sales repair service is a big share of LEV business in China

- Repair service is very important part of China LEV industry.
- Chinese consumers have a different expectation from USA, EU, or Japan.

售后修理是中國電動車行行業中重要組成部分

- 修理服務是中國電動車行業的重要組成部分。
- 中國消費者對所購產品的期望值不同于西方消費者

The size of after sales service market

- 1/3 of total price of bike spent on after sales service every year.
- Battery 350RMB
- Tyres 90RMB
- Controller or charger 100RMB
- Throttle 35RMB
- Brush Motor 380RMB(every 2.5-3years)
- Brushless Motor 200RMB as same as its controller (1.5years)

售後服務市場的規模

- 每年的修理費相當于1 / 3的電動自行車價格
- 電池：350人民幣
- 輪胎：90人民幣
- 控制器或充電器：100人民幣
- 轉把：35人民幣
- 有刷電機：380人民幣 (2.5-3年)
- 無刷電機及其控制器：200人民幣 (1.5年)

The output of the repair market

- If 4million e-bikes are sold with 6 billion sales volume in the first year....
- The repairing market will make at least 2 billion sales in the second year!
- The expectation of the consumer is that the bike is used for at least 5 years.
- The total expense of the e-bike purchase and service increases from 2000rmb initially at shop to 5000rmb total in 5 years.

維修市場的消費量

- 如果第一年電動自行車的銷量為400萬輛，對應銷售額為60億，
- 那么第二年維修市場至少可以有20億的消費量。
- 消費者預期所購車的電動車使用壽命為5年。
- 一輛原購買價格為2000RMB的電動車在5年后的價值為5000RMB。

After sale service is More Profitable than Sale Bike

- Manufacturer's margin today is 100-150RMB
- Retailer's margin is 100-200RMB
- Repair service margin is at least 200RMB / year

修車比售車更賺錢

- 當前製造商的利潤為：100-150人民幣 / 輛
- 零售商的利潤為：100-200人民幣 / 輛
- 修理服務至少盈利：200人民幣 / 輛

The Competition of the Repair Market is Very Tough

- E-bike manufactures
- E-bike retail shops
- Repairing with shop and authorized by the bike association
- Repairing with small shop
- Repairing without shop

維修市場競爭激烈

- 電動自行車製造商
- 零售商店
- 自行車協會授權的銷售兼維修商店
- 帶有小型商店的修理鋪
- 街邊修理鋪

Manufactory in repairing

- Different manufactures have different attitudes
- Some companies make good relationships (also profitable) with end-users by providing good maintenance.
- Since e-bike is still a quite young industry...many companies do not know how to deal with this.
- The manufacturer must have the database of end-user.

製造商與售後服務

- 製造商的態度各有千秋
- 有些製造商通過良好的售後服務和終端用戶保持良好關係
- 由於電動自行車是新興行業，許多公司還缺乏相關經驗。
- 製造商必須具有終端用戶的聯系方式。

E-bike retail shops

- More and more retail shops are aware that repairing business can help them to keep the customers and bring in the new customers, and it is a big income.
- They are directly talking with end-user.

電動車零售商店

- 越來越多的零售商意識到維修服務可以幫他們留住客戶及吸引更多的客戶。同時這是個很大的收入來源。
- 可以直接與終端用戶交流。

Factory Authorized Repair Shops

- They are started since 1999. Most of them are from the manufacturer or some specialist.
- Part of their job is to help the manufacturer to solve the customer's problem during warranty.
- Today, such shops are more and more replaced by the manufacturer or bike retailer.
- The manufactures who sell only through wholesale chain supermarket needs these shops.

工廠授權的修理鋪

- 適于1999年。多數來自製造商或相關專家。
- 他們主要幫助製造商解決保修期間的客戶問題。
- 如今，此類商店被越來越多的製造商或自行車零售商代替了。
- 通過大賣場銷售的製造商需要此類修理鋪。

The Other Party

- The components (spare parts) whole sale is very attractive to not only the retail shop and authorized repairing shop, but end user too.
- They provide key insight into pricing.
- Today they are growing rapidly.

其他參與者

- 零配件批發商不僅對零售商店和授權修理鋪有吸引力，而且受到了終端客戶的青睞。
- 他們對配件的價格起了很大作用。
- 如今正快速發展。

Parts in Repairing and Service

- Component development and price
- The warranty service and tricks
 - Motor
 - Battery
 - Charger
 - Interface
 - Control system
 - Frame
 - plastic

售後服務中配件介紹

- 配件發展及其價格
- 保質服務期及維修細節

電機
電池
充電器
人機界面
控制系統
車架
塑料件

Component development and price---Motor

- 1999 / 2000 / 2001 / 2005 (year)
- Brush with gear / Brush less / Brush direct Drive / Brush less
- 430 / 300 / 350-220 / 250 (RMB/OEM)
- 700 / 500 / 600-650 / 500(RMB/e-bike manufacturer)
- 450 / 320 / 370-240 / 270(RMB/component distributor)
- 580 / 400 / 500-380 / 350(RMB/repair shop)

配件的發展和價格—電機

- 1999 / 2000 / 2001 / 2005 (年份)
- 有刷有齒 / 無刷 / 有刷直流驅動電機 / 無刷
- 430 / 300 / 350-220 / 250 (人民幣 / 電機廠)
- 700 / 500 / 600-650 / (人民幣 / 電動車製造商)
- 450 / 320 / 370-240 / 270 (人民幣 / 配件分銷商)
- 580 / 400 / 500-380 / 350 (人民幣 / 修理鋪)

The warranty service and tricks--Motor

- Brush with 2years and brushless with 5years warranty
- Brush with gear (gear with oil, gear has been less in surface)
- Brush direct drive (bearing, brush, magnetic)
- Brushless (controller, bearing, magnetic)

保修服務期和維修細節－電機

- 有刷電機2年質保，無刷電機5年質保
- 有刷有齒（齒輪餉，齒輪變形，少齒）
- 有刷直流驅動電機（軸承，炭刷，脫磁）
- 無刷（控制器，脫磁，軸承）

Component development and price---control system

- Different throttle make different control system
- Different brake make different control system
- The different wire harness connections
- Brush control from OEM at 180rmb(highest 1999)-22rmb(lowest 2005)
- Throttle from 19rmb(1999)-2.5rmb(2005)
- Brushless control from 180rmb/180w(2000)-90rmb/350w(2005)

配件的發展和價格-控制系統

- 不同的轉把對應不同的控制系統
- 不同的剎車對應不同的控制系統
- 不同的線束連接
- 有刷控制器價格（控制器製造商）從1999年最高180人民幣到2005年最低的22人民幣
- 轉把從1999年最高的19人民幣到2005年最低的2.5人民幣
- 無刷控制器從180人民幣/180w(2000) 到90人民幣/350w (2005)

The warranty service and tricks--control system

- Throttle/brake warranty from 3month-6month
- Control warranty 1year
- Too many different consists, make it very confusion

保修服務期和維修細節-控制系統

- 轉把/剎車保修期：3個月-6個月
- 控制器保修期：1年
- 由于參數不同，組合不同，因此在實際保修期中執行非常混亂。

Component development and price---Battery

- In china the most success battery is lead acid, it is according to the coverage and cycle life
- 1998__1999__2002__2004
- 12Ah/10h__10Ah/2h__14Ah/10h__16Ah/10h
- 90 / — / —__145/120/90__115/85/68 OEM (hipower(tianneng) / panasonic /lowest)
- 150__160 / 200 /??__120 / 150 /?? e-bike manufactory
- 135__125 / 160 /115__110 / 140 /90 repair shop/bike shop

配件的發展和價格-電池

- 在中國，從承保範圍和循環周期看，最成功的電池是鉛酸電池。
- 12Ah/10h__10Ah/2h__14Ah/10h__16Ah/10h
- 1998__1999__2002____2004
- 90__120 / 145 /90__ 85 / 115 / 68 電池廠
(海寶 (天能) /松下/最低價)
- 150__ 160 / 200 /??__ 120 / 150 /?? 電動
車製造商
- 135__ 125 / 160 /115__ 110 /140 /90 修
理鋪/車行

The warranty service and tricks-

-- Battery

- 1 year 60% capacity warranty
- We have to spend more years to learn how to get more cycles from battery.
- Different lead acid battery with different customer
- The top three batteries should not have more than 10% problems with the warranty.
- The most common problems with battery warranty is from motor, control, bike weight, charger, etc
- If happen 2 solutions
- Tips (the return of the battery)

保修服務期及維修細節-電池

- 1年內保證60%的容量
- 我們還需更多時間來研究延長電池壽命的方法
- 不同鉛酸電池有不同的客戶
- 最好的三種電池質保問題不該超過10%
- 常見的電池保修問題來自電機，控制器，整車重量，充電器等
- 一旦發生問題，有兩種解決方案
- 提示（電池退貨）

Component development and price---Charger

- Due to the history of cell phone charge, people always expected the charger should be cheap.
- 180__135___100__75___50___35_
_25 OEM manufactory
- 220__180___150___120 e-bike
manufactory
- 180___150___120___90___75
___50 ___35 retail shop

配件的發展和價格-充電器

- 從手機電池的發展可以看出，人們普遍接受廉價充電器。

180__135__100__75__50__35__25人
民幣 OEM 製造商

- 220__180__150__120 人民幣電動車製造商

- 180__150__120__90__75__50
__35人民幣 零售店

The warranty service and tricks-charger

- 1 year electronic warranty
- High Ratio failure product
- Most trouble prone product

保修服務期和維修細節-充電器

- 1年電子保修
- 高返修率產品
- 最麻煩的產品

Component development and price---Frame

Due to the Chinese market we use cheap bicycle frames.

The frame, combined with other components to become bicycle should be very cheap

No more than 300rmb for the entire bicycle.

Good business attitude OEM manufactory is always very important which is always to return to them

配件的發展和價格-車架

- 根據中國市場實際情況，大家普遍采用低價位的車架。
- 車架和零配件組合的自行車應該做到非常廉價
- 整車價格不超過300人民幣
- 良好的生意態度OEM製造商非常重要

The warranty service and tricks- --Frame

- The frame carries a 2 year warranty
- But a lot of customers complain about freewheels, cranks, etc
- Most of the e-manufacturers do not have the experience with bicycle parts.

保修服務期及維修細節-車架

- 車架保修期為2年。
- 但很多客戶投訴飛輪，曲柄等部件的問題。
- 多數電動車製造商缺乏自行車配件方面的經驗。

Component development and price---Plastic

- This is the most interesting part.
- Our government encourages the industry to develop the e-bicycle, but in general the consumer prefers the scooter style which needs a lot of plastic cover
- 1999-2000-2002-2003
- 180-280-300-400rmb OEM
- 400-500-600-900rmb e-manufacturer
- 420-550-650-950rmb retail shop

配件的發展和價格-塑料部件

- 最有意思的部件.
- 政府鼓勵電動自行車的發展，而大眾則偏愛摩托車式的電動車，這種車需要大量塑料外殼。
- 1999-2000-2002-2003
- 180-280-300-400人民幣 塑料廠
- 400-500-600-900人民幣 電動車製造商
- 420-550-650-950人民幣 零售店

The warranty service and tricks

---Plastic

- In general the plastic carries no warranty
- Many different edbike companies purchase one model from one OEM
- Many different company supply very similar plastic parts if the model has been getting popular
- Many different parts on one bike
- Most expensive

保修服務期及維修細節-塑料部件

- 通常塑料件無保修。
- 許多電動車公司採用一家塑料製造商所供應的款式。
- 成功的款式有出現非常相似的塑料部件。
- 每輛車上有許多不同的塑料部件。
- 非常昂貴。

Warranty in Real Life

- Technology development helps warranty
- Warranty definition vs. expectation

實際生活中的保修

- 技術的發展有利于保修的順利進行
- 保修的定義vs. 期望值

The E-bike Industry is Very Young

- Lack of technicians
- Lack of standard components
- The rapid growth of sales, vs. the slow growth of support and service infrastructure.

電動自行車行業還很年輕

- 技術員的匱乏
- 標準配件不足
- 銷量的快速上升vs. 售后服務的相對滯后

The Future of the Electric Bicycle and Warranty Service

- It just like any other industrial, the repairing market is unhealthy and unexpected from the consumer
- Today's huge repair market means a lot of improvement is needed.
- Shanghai has to learn again from the other big city about transportation systems.
- China needs a lot of education about good bicycle product and good quality product.

電動自行車的將來和保修服務

- 同其他行業一樣，修理市場還不夠完善，經常和消費者所期望的產品質量有差距。
- 今天的巨大修理市場說明很多的技數仍需要改進和提高。
- 上海應向其他大城市學習交通系統的管理。
- 中國有必要學習如何提高產品質量。

Thanks

- Questions?
- Questions emailed to chendingwu@hotmail.com will be answered as best as I can and referred to other experts if appropriate.

謝謝大家

- 請提問
- 有問題請發電子郵件至：
chendingwu@hotmail.com 我會盡力回答，
或者另請有關專家回答