

Model 5

with AutoBrake

Owner's Manual

Manufactured in USA



Kangaroo Products Company, 111 Kangaroo Drive, P. O. Box 607, Columbus, NC 28722-0607
Phone (828) 894-8241 • Fax (828) 894-2718 • (800) 438-3011
caddie@KangarooGolf.com

INSTRUCTIONS FOR REPORTING DAMAGES DURING SHIPMENT

Call Kangaroo, with your invoice number. Please specify which parts on the invoice are damaged. Kangaroo will send replacement merchandise promptly, generating a provisional invoice for the replacement items. Then . . .

Do NOT return damaged merchandise to Kangaroo, and don't destroy any carton or packing material in which merchandise was shipped. Everything will be needed by the carrier on your receiving end.

If shipment was via **United Parcel Service**, call toll-free **(800) 742-5877**, then select "zero" for the operator, or if shipment was via **FedEx** call toll-free **(800) 463-3339**. Either carrier will arrange to pick up your shipment and inspect damage.

RETURN ADDRESS

Kangaroo Products Company
111 Kangaroo Dr.
Columbus, North Carolina 28722

Phone: 828-894-8241
Fax: 828-894-2718

Email: caddie@KangarooGolf.com

For a wealth of information about your Model 5, please feel free to visit our Owner's CyberClub. It's a password protected site designed specifically for Kangaroo Owners. To access the Owner's CyberClub go to <http://www.kangarogolf.com/welcome.htm> and apply for membership.

You'll find additional technical information, parts lists, and assembly instructions. You can order many parts securely via the Web 24 hours a day.

Index

Reporting damages during shipment	2
Return Addresses	2
Owners CyberClub	2
Assembly Instructions	4, 5
Controls and Operations	6, 7, 8
Rear Wheel Removal & Replacement	9
Owner Maintenance	10
Factory Warranty Service	10
Your Warranty	11
Parts List	12, 13, 14, 15
Battery & Charger	16
Optional Accessories	17, 18

Trouble-Shooting Tips

Speed Control	19
AutoBrake	19
Caddie not tracking straight	20
Motor running, but wheels not turning	21
Rear Wheel Attachment	22, 23
Bag Support Position	24
Motorcaddie stopped running	25
Motorcaddie stops intermittently	25



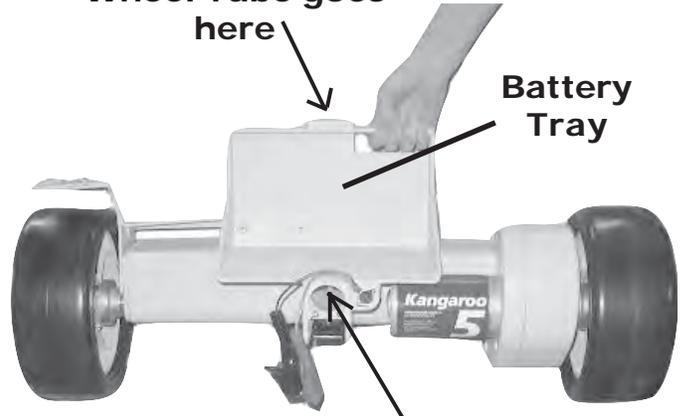
Model 5 Assembly

Your Model 5 is shipped without the rear wheels attached. See page 9 for assembly instructions and photo.

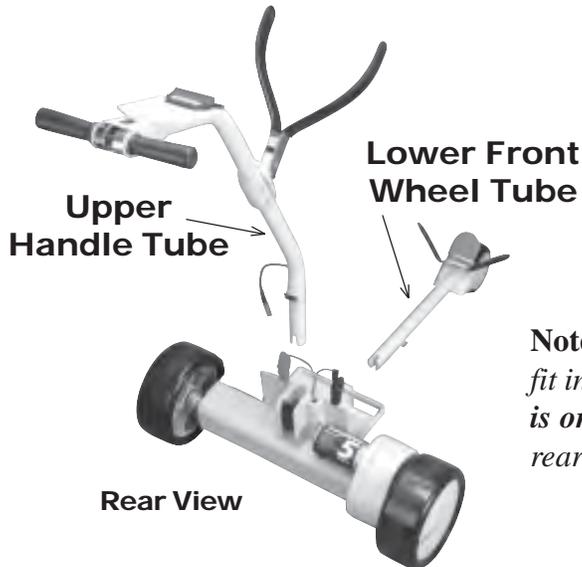
Steady the chassis by using the hand-hold, located in the battery tray. Insert the **Lower Front Wheel Tube** into the hole located in front of the battery tray. (shown photo right)

Lower Front Wheel Tube goes here

Battery Tray



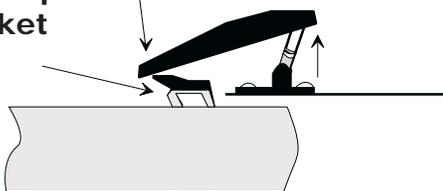
Upper Handle Tube goes here



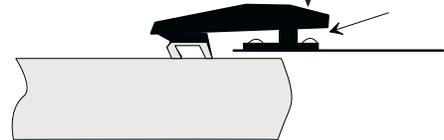
Note: The Handle and Front wheel tubes will fit in either hole-- therefore be sure the **motor is on the top right side**, while standing at the rear of the motorcaddie.

Insert the **Upper Handle Tube** into the top of chassis just behind the battery tray. (Shown photo above)

Latch Keeper Bracket

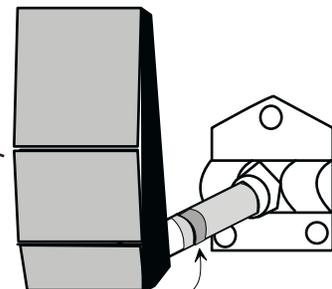


Drawlatch Base



Note: To avoid possible breakage, always **close Drawlatches before** placing chassis into your car.

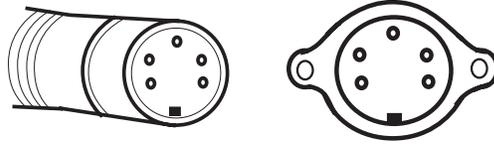
Drawlatch (100-140A)



Metal Tension Adjustment Ring

Connect the Control Cable plug from the Upper Tube Handle to the receptacle in the chassis.

*Always **hold the plug** when connecting or disconnecting the control cable. Pulling on the wire can cause damage.*



Control Cable
with Plug

Control
Receptacle

Note: *At this point of assembling your caddie for use, establish the habit of making sure the ON/OFF rocker switch is in the “OFF” position before connecting your battery cables. (See page 6 photo)*

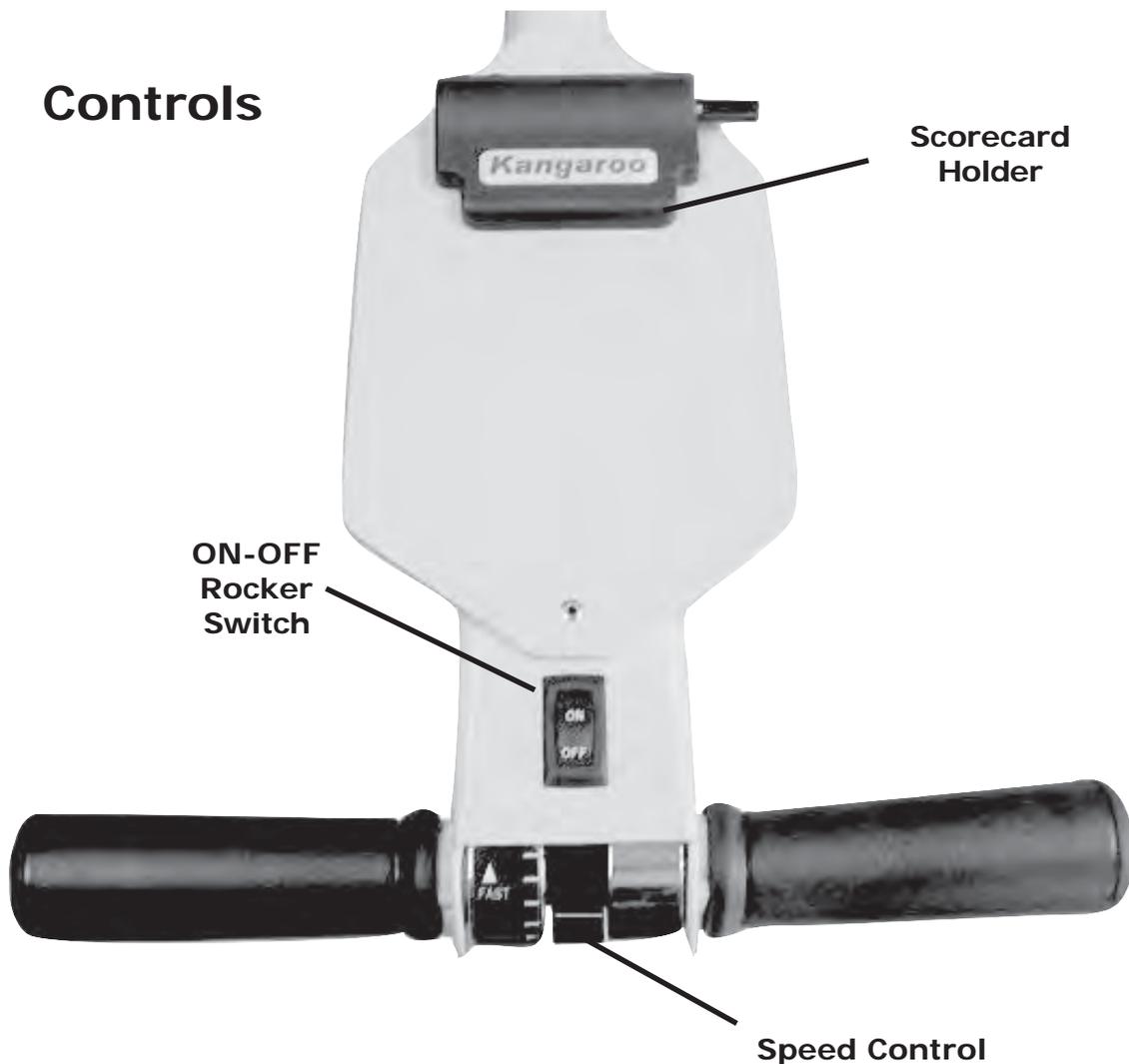
Remove the black plastic cover from the battery post. Set the battery into the battery tray with posts to the back of the battery tray. Connect the red clip to the (+) positive terminal and the black to the (–) negative terminal. If the cables are accidentally reversed, your motocaddie will not run until the polarity is corrected. (The caddie is equipped with reverse-polarity protection, and connecting the terminals backwards won’t harm the unit.)

The upper bag support, also referred to as the yoke, is designed to fold up for easy transportation and storage. Pull it down until it comes to a stop. It can be adjusted to grip your golf bag by bending the arms open or closed as needed.

The yoke is attached to the upper tubing handle at the best position to hold most golf bags securely. If you have an unusual bag, or a personal preference for its position, its clamp can be moved up or down the tubing to any point you like. The yoke is secured with four 5/32” allen-type machine screws and a suitable wrench is provided with your caddie. Simply loosen the four screws and adjust the clamps accordingly, then re-tighten securely.

Your Model 5 comes with an assortment of allen-type wrenches. They are provided for adjusting the upper bag yoke, keeping screws tight, and for adding accessories.

Controls



ON-OFF Switch:

The ON-OFF switch, located top center of the handle, is self-explanatory in operation. It is located for convenient access in starting or stopping your Model 5.

Speed Control and Operation:

Speed is controlled by the rotary thumb-wheel located between the handle grips. The speed control decal indicates speed in relation to the thumb-wheel position.

Note: Turning the speed control all the way down doesn't turn off controls, even if your motorcaddie isn't moving.

There is a feature, known in technical terms as "ramp up", that automatically provides a gentle start at any setting up to, and including, full speed. Even so, your Model 5 is very powerful, and it's best to start out at lower speeds, at least until you become familiar with the motorcaddie.

Normal Operation:

1. Turn dial to desired speed setting
2. Turn ON-OFF switch to ON. You can vary the speed control to suit your own walking pace.
3. To stop, turn ON-OFF switch to OFF. There's no need to change the speed control when stopping and re-starting.

Runaway and Circuitry Protection:

The Model 5 will automatically shut itself off if the switch is left ON for an excessive period of time. The reason for this is to shut it off in a possible runaway situation. This also allows the solid state circuitry a cool-down period. To avoid activation of this safeguard, turn OFF the rocker switch each time you stop. Merely turning the speed all the way down will not reset this internal timer and will cause the Model 5 to unexpectedly shut off. If you forget, and your motorcaddie unexpectedly “cuts out” or is “dead”, turn the ON-OFF switch to OFF and then back ON to restart.



AutoBrake Operation:

The Model 5 is equipped with a transaxle drive train that engages the motor/gear drive unit and wheels at all times. The motorcaddie will not free-wheel when pushed forward.

As you go downhill, with the power still switched ON, turn the speed control thumb-wheel downward to a slower setting. The motorcaddie will slow down and give you a feeling of security as you drive down the hill.

If the slope is extremely steep, you may turn the power switch OFF, which will provide approximately 50% more braking power than just turning the speed control to its slowest setting. If this is too much braking power, alternate turning the power switch OFF and ON until you reach the bottom of the hill.

WARNING: *If you must tow your Model 5 either forward or backward, always put the Model 5 into free-wheeling FIRST! Gear damage may result from pulling or pushing your Model 5 with great force or for long distances. Damage incurred from failure to disengage drive wheels from gear train is NOT covered by warranty.*

See free-wheeling instructions on page 9.



AutoBrake isn't supposed to STOP your motorcaddie. Rather, it slows it down when going down hills. It does NOT function as a parking brake. Therefore, always make sure the motorcaddie is turned sideways when you're stopped on a slope.

Overcurrent Protection:

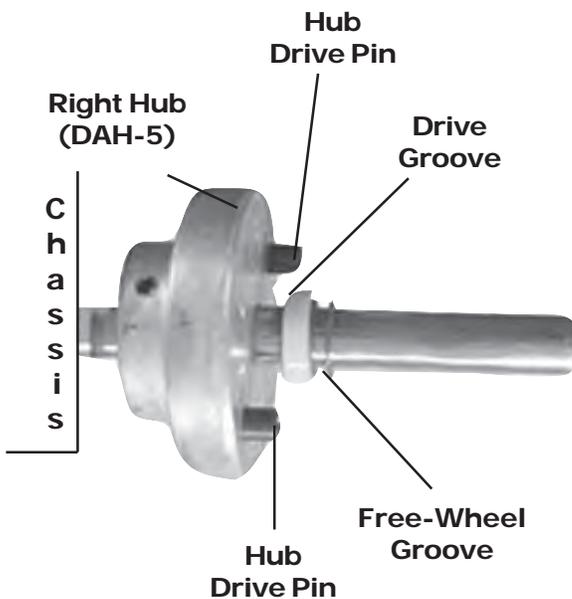
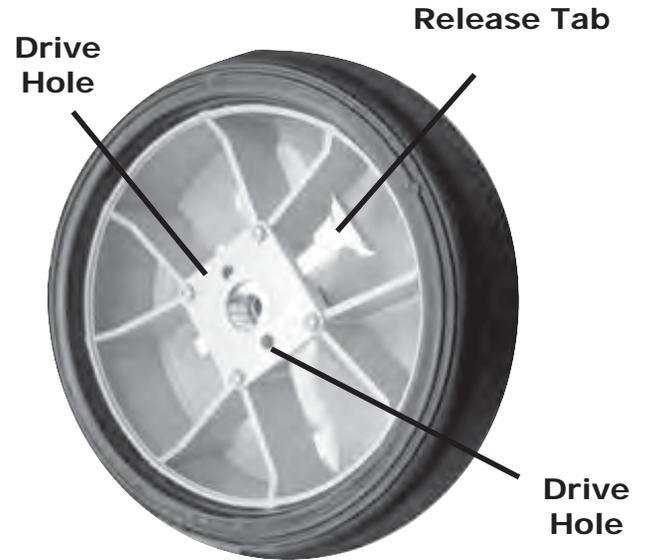
An electric motor draws current to meet the load placed on it. If the load is too great, there is danger that excess amperage will be drawn, damaging controls, wiring or the motor itself. An example of this could be a motorcaddie stopped by shrubs or trees, or unable to roll, while the power is still on.

Your Model 5 is equipped with an overcurrent protection circuitry. It turns itself OFF in most situations that cause current draw to approach the danger level.

In this event, reset your Model 5 by turning it OFF manually at the ON-OFF switch. After you have corrected the problem, cleared the obstacle, etc., turn your Model 5 back ON and continue normal operation.

Rear Wheel Assembly and Removal

Both rear wheels on the Model 5 motorcaddie are easily removed and replaced. The wheel is held in place by a spring-loaded **Release Tab** on the inside of the wheel. The **Tab** seats into a groove on the axle. There is a groove for the **Drive** position and one for the **Free-Wheeling** position.



To install the wheel on the axle, pull the wheel **Release Tab** back. While holding the **Release Tab**, place the wheel on the end of the axle. Slip wheel all the way against the **Hub**, aligning the **Drive Pins** on the hub into the **Drive Holes** in the wheel. When the wheel is on the axle, up against the **Hub** with **Drive Pins** engaged, release the tab. This will allow the **Release Tab** to lock into the **Drive Groove**, and the wheel should now be securely mounted on the axle. Wheels should NOT slide off the axle.

To REMOVE wheels, pull the **Release Tab** back toward the tire and slide the wheel off axle. Wheels are not left/right specific and can be installed on either side.

Free-Wheeling Function:

Free-Wheeling means that the wheels will turn freely without engaging the axle or gear train. Placing the motorcaddie into Free-Wheeling is a **MUST** if the Model 5 is to be pulled or towed.

To position each wheel into Free-Wheeling, pull the **Release Tab** on the inside of the wheel back towards the tire. Slide the wheel outward slightly on the axle. Position the wheel so that the Release Tab is centered in the **Free-Wheel Groove**. Release the tab to allow it to lock in the proper groove. Wheel should now spin freely. **Hub Drive Pins** will no longer be engaged into the wheel's **Drive Holes**. Now try to move the wheel outward on the axle to ensure the **Release Tab** is locked. The wheel will NOT slide off the axle if properly positioned.

OWNER MAINTENANCE

Don't Oil it!

The Model 5 has been designed and manufactured to be essentially maintenance free. Do not open or attempt to service the transaxle gear train. It is tuned at the factory to minimize gear noise. It also contains a special lubricant, which is sealed inside by a gasket. The control system is well designed, with quality parts and full protection circuitry. There are no user serviceable components.

Keep it Clean!

The only type of maintenance required for the Model 5 is to keep it clean. Use soap or mild detergent and water, then rinse with clean water. You **MUST** avoid getting water in the control plugs. Your Model 5 can dry in the sun, but the powder-painted stainless tubing should be wiped dry for the best luster. Never use an abrasive cleaner.

For Good Looks!

It is a good idea to use a quality automotive wax on the powder-painted tubes to prevent fingerprints and smudges from showing up. The Model 5's polyurethane tires are made of a compound unaffected by conditions that deteriorate ordinary rubber. You may use a cleaner/preservative such as Armorall[®], or a similar product, to keep it looking like new.

Normal Wear & Tear

The Handle Grips and Bag Huggers may deteriorate with use. This is normal wear and tear and is not covered by warranty.

FACTORY WARRANTY SERVICE

If you need repair or service, please follow this procedure:

1. Telephone or e-mail the factory-owned location on page 2 of this manual for advice from Technical Service.
2. If Technical Service instructs you to return your motorcaddie or part of it, pack your motorcaddie in the original carton or a sturdy substitute container. Enclose a note with Name, Address, Daytime phone number or e-mail, and description of the problem you discussed with Technical Service.

Any parts and services provided under warranty do not extend the original warranty. Any out-of-warranty service, including parts and labor, is warranted for 60 days. If the service is not under warranty, please specify whether you'd like for us to invoice you or charge to your credit card, include all numbers and the expiration date of your card.

FIVE-YEAR WARRANTY



***So Superior
It's warranted for Five Years***

For subsequent sixty calendar months, the original retail purchaser (Owner) will be entitled to free repair by the manufacturer (or replacement, at Kangaroo's option) of covered parts... motor, power train, wheels, tubing and all electronics. Necessary labor will also be at no charge.

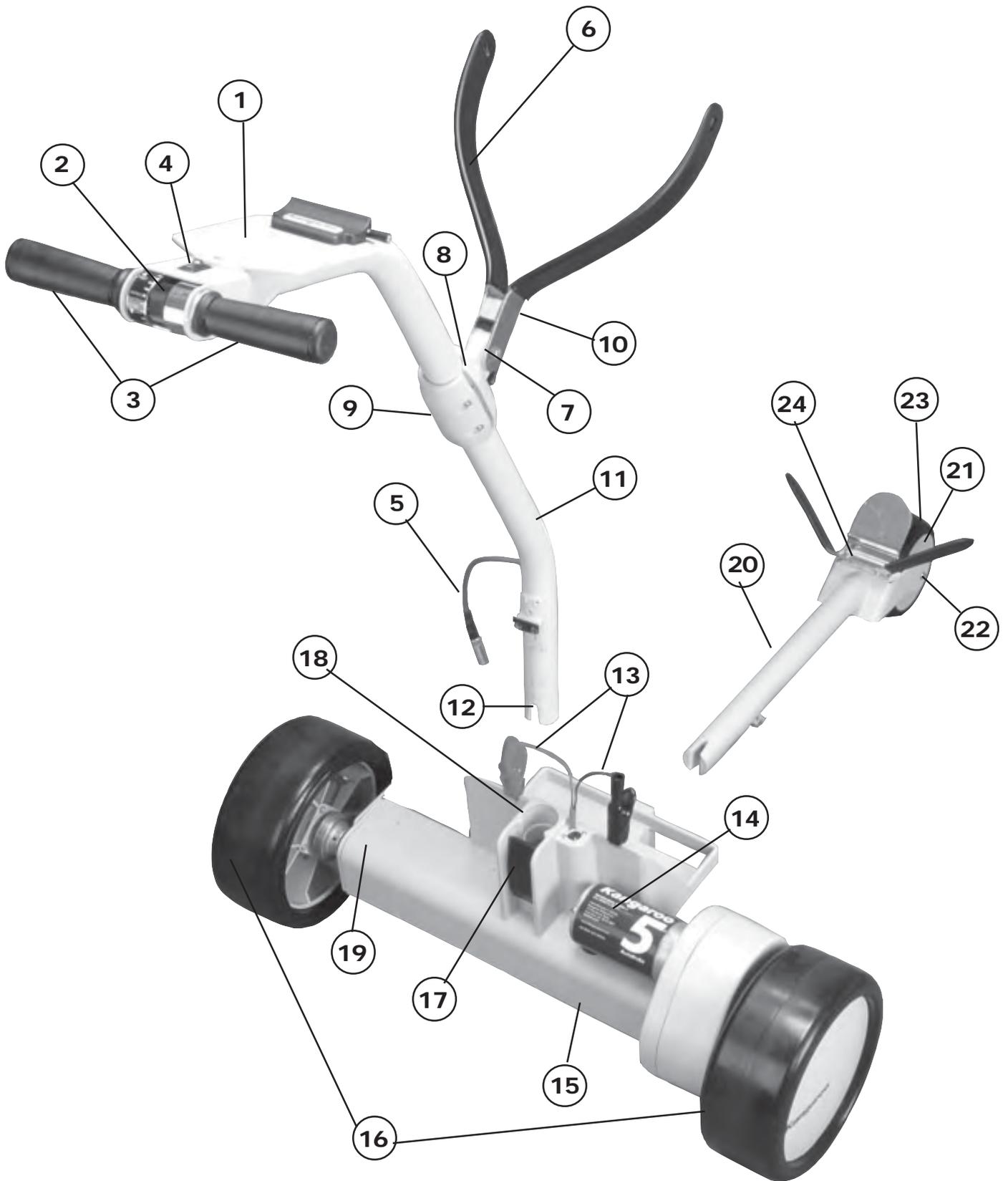
All warranty work **MUST** be done at Kangaroo company location at Columbus, North Carolina. All shipping charges are the responsibility of the Owner.

Exclusions to warranty coverage include: damage from shipment to Kangaroo, ordinary wear & tear, hairline cracks in structural parts (not affecting motorcaddie operation), results of neglect, abuse, or accident, damage by persons other than the Owner, or utilization for any purpose other than carrying golf bags on golf courses. Battery, Charger, and accessories have separate warranties.

The Kangaroo Model 5's Five year Warranty is not automatically transferable. If the motorcaddie is sold, the new owner can purchase the remaining warranty for \$2 per month left on the warranty. To do this, the new owner must contact Kangaroo, request the warranty transfer and provide proof of the original purchase.



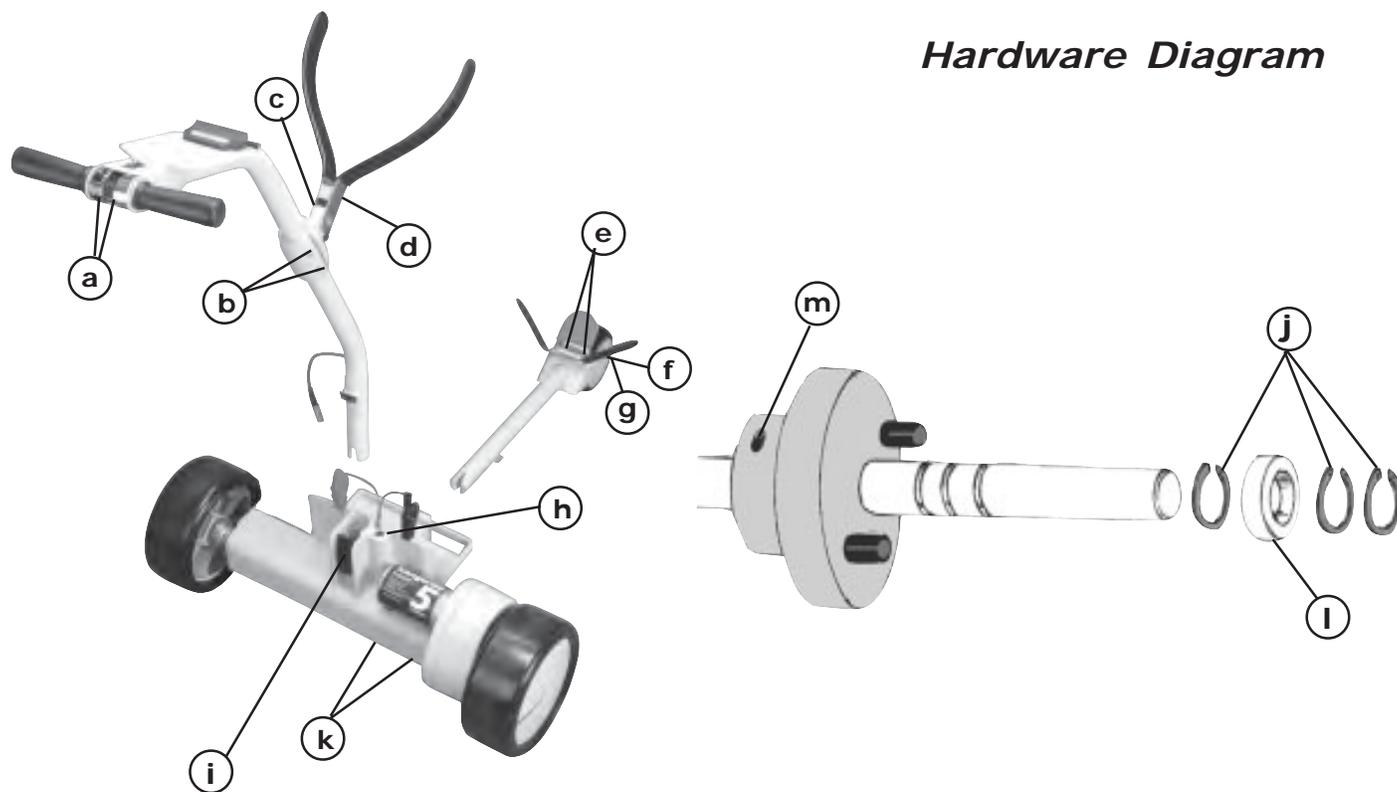
Model 5 Parts List



Model 5 Parts List (from diagram)

Ref. #	Part Code	Part Description	Need
1	600-479A	Scorecard Holder	
2	400-280	Speed Control Knob	
3	400-411A	Handle Grips	2
4	400-320	On/Off Rocker Switch	
5	400-811	Control cable w/plug	
6	407-480	Yoke (<i>without Huggers</i>)	
7	400-416A	Yoke washers	2
8	407-414	Top yoke clamp	
9	407-413	Bottom yoke clamp	
10	400-421A	Yoke stop Metal	
—	400-490	Yoke assembly complete (<i>see page 24</i>)	
11	400-400M5	Upper Tube Complete (<i>Handle</i>)	
12	800-430	Tube plug shim	
13	100-001A	Croc Clip Kit with Wire	
14	100-104B	Motor	
15	100-106	Control "Circuit" Board	
16	201-201A	Wheel & Tire Assembly	
17	100-140A	Drawlatch (<i>two per motorcaddie</i>)	
18	100-107B	Chassis insert	
19	100-116	Chassis	
20	300-300M5	Front Wheel and Tube assembly	
21	300-311B	Front Wheel Hub (<i>2 halves</i>)	
22	300-309	Front wheel axle	
23	300-310B	Front tire	
24	307-307	Lower Bag Mount (<i>without Huggers</i>)	

Hardware Diagram



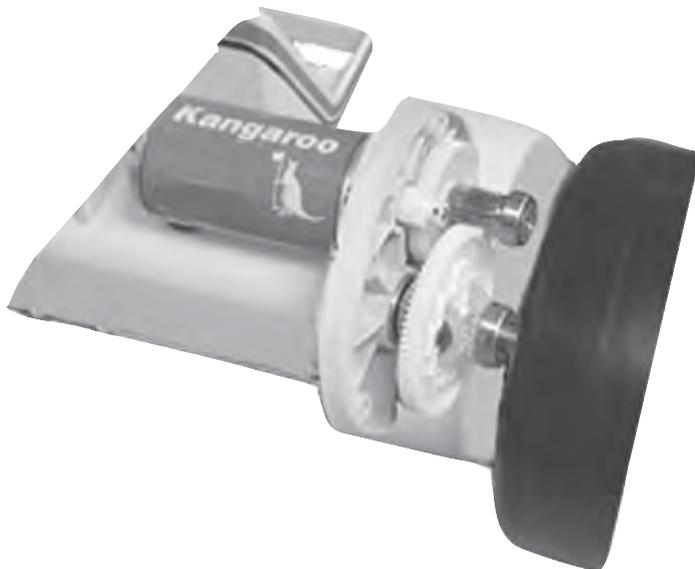
Ref #	Part Code	Description	Need
a	899-370	Handle screws	2
b	899-360A	Yoke clamp screws	4
c	899-490	Yoke bolt	1
--	899-492	Yoke Lock Nut	1
d	899-830B	Yoke stop screw	1
e	800-220	Lower bag mount screws	2
f	899-309	Front wheel screws	2
g	899-310	Front wheel star washers	2
h	899-110	Receptacle screws	2
i	899-150	Drawlatch screws	6
j	800-410	Axle retainer rings	6
k	899-831	Control board screws	4
l	800-512A	Axle ring spacers	2
m	DRP	Roll pin 3/16 x 1 1/2	2

Parts not shown on diagrams

<i>Part Code</i>	<i>Description</i>
400-309A	Speed potentiometer
100-791	Control wire with receptacle
700-008	Upper bag huggers
700-009	Lower bag huggers
110-900	Long axle (left side)
110-800	Short axle (right side)
DAH-3	Hub with roll pin (left side)
DAH-5	Hub with roll pin (right side)
100-010A	Axle bearing
300-210B	1/2" bronze bushing

Left/Right defined from rear of motorcaddie in its direction of travel with your hands on controls.

TECHNICAL SPECIFICATIONS:



Motor:

High torque, 2-pole armature/permanent magnet, 12-volt DC

Drive Train:

Double reduction, sealed maintenance-free self-lubricating gear drive with differential and direct-drive hubs

Controls:

All solid-state motor control, 45 amp capacity, all circuitry under overcurrent and reverse polarity protection.

All parts and specifications subject to change without notice.

Internal view of the precision-made transaxle, with 4 power train gears plus 4 beveled differential gears, enabling easy turning and Automatic Braking.

TG-31 Deep Cycle Battery

Maintenance-free gel cell battery. Lasts longer: permanently sealed valves keep the six battery cells properly pressurized and prevents oxygen contamination. Comfortable, retractable handle. Engineering tests prove cost-per-round will be less than inferior batteries. 5 x 7 1/2 x 6 inches. You must use at least a 31 amp-hour, 12-volt battery on Kangaroo motorcaddies.
-- Item BATPA Battery

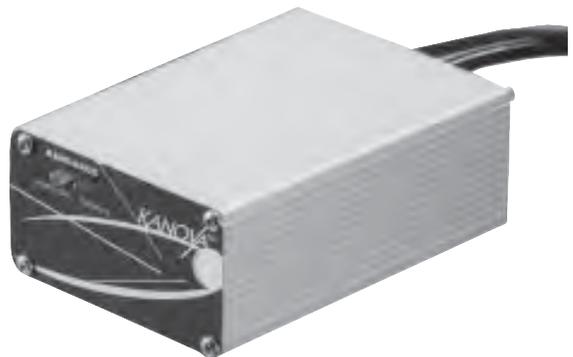


Battery Carrying Case

Safely carry your battery from home, to car, to golf course. Protects against accidental contact sparks. Tie down bars hold battery and case secure on any surface, such as your auto trunk. Has strap for easy carrying.
-- Item BCC00 Battery Carrying Case

Kanova Battery Charger

Best charger you can have, available exclusively from Kangaroo. Leave charger connected continuously to your battery -- even for months! Extends battery life, automatically reduces input voltage during storage mode. Tends battery with safe minimal amperage.
-- Item KNBC Battery Charger



**OPTIONS
FOR
YOUR**



Model 5

*For quick and easy ordering
24 hours a day, seven days a
week, order securely via our
website.*

www.KangarooGolf.com



**Observation
Seat**

*Mounts at side of your Kangaroo, out of the way while you walk behind your motorcaddie. Spring loaded. Seat molded of puncture-proof polyurethane foam -- more durable than rubber or vinyl. Withstands rain, ozone, and ultraviolet rays.
--Item 600-100A Model 5 Seat*



**Sand & Seed
Holder**

*Repair divots to help maintain your course fairways. Comes complete with Sand Bottle. Just fill with your superintendent's divot repair mixture.
-- Item 600452 Sand and Seed Holder*

Beverage Holder



Kangaroo's beverage holder provides an easy way to keep your open drink handy. It will hold cups, cans, mugs, or bottles.

As with all of Kangaroo's parts, we provide you with an easy-to-follow installation guide for hassle-free mounting.

The beverage holder will mount vertically, horizontally or at an angle. It can also be alternately mounted for convenient right or left handed use. The mount has a built-in shock absorption swing, allowing the holder enough movement to prevent drink spillage.

This rugged holder is made of high-impact polypropylene and will withstand all types of environments. Our beverage holder is so versatile, and easy to use, you may want to buy several for use with other vehicles.

-- Item 600-450 Beverage Holder

Ball and Club Washer

Kangaroo Vice President, Tim Pope has intensively field-tested the Ball and Club Washer. He says, "This is a really fine product. I've gotten so I don't like to play golf without it on my Kangaroo." The Ball and Club Washer is made to commercial-tough standards. It mounts in the seat bracket on your Kangaroo; it's out of the way, hugging the wheel. When you've finished for the day, just slide the Washer out of the bracket and stow in your car. {grin} Pour the water out first!

If your Kangaroo already has a seat bracket, no installation is needed. Simply fit the L-bracket of your Ball and Club Washer into the seat bracket on your Kangaroo so that the Ball and Club Washer is above the wheel. If you do not have a seat bracket, the Ball and Club Washer chassis brackets are available. They ship complete with easy to follow installation instructions.

-- Item 600-400

Ball 'n Club Washer

-- Item 600-403

Chassis Bracket (if you do not have seat)





TROUBLE-SHOOTING TIPS

My motorcaddy runs on fast speed only.

Do you have a friend that has a Kangaroo Model 5 with whom you can swap handles? Note: (*Hillcrest AB handles will not work in a Model 5*) If you put a friend's handle in your motorcaddy and their speed control functions properly, then the **speed potentiometer** (600-897) in your handle needs to be replaced.

If the speed control on your friend's handle doesn't work in your motorcaddy, then your **control board** (100-106) probably needs to be replaced.

My motorcaddy has suddenly lost the AutoBrake function.

There is an electrical resistor built into your control board for braking. If your motorcaddy does not automatically brake when power is switched OFF, the control board underneath the chassis needs to be replaced or factory serviced.

My motorcaddie isn't keeping a straight line.

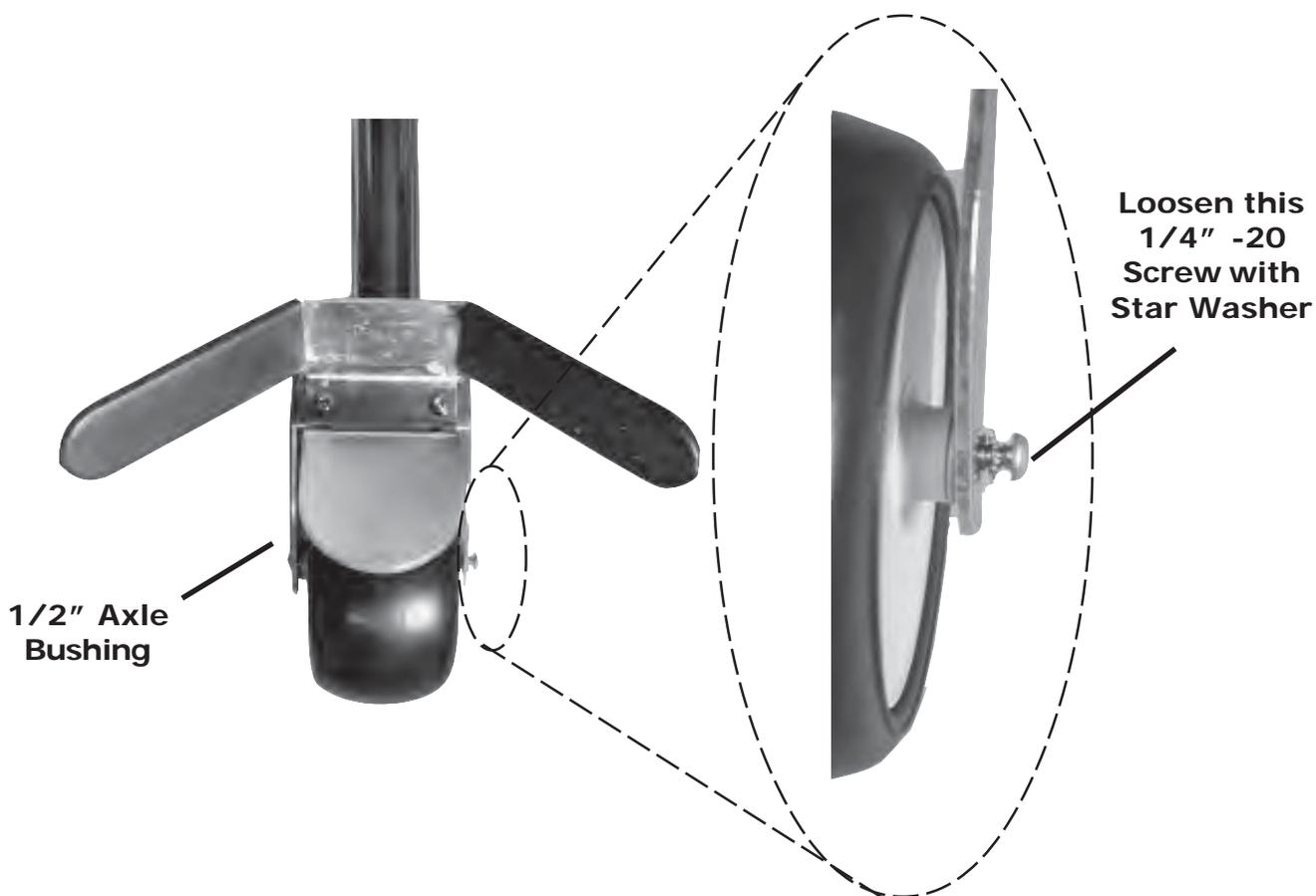
The front wheel is out of alignment. It is best to put your motorcaddie on a paved level surface to test your motorcaddie.

The center of gravity and weight distribution of your golf bag can affect the straight line travel of your motorcaddie. In some cases you may need to make the alignment adjustments with your golf bag on the motorcaddie, or re-adjust the contents of your bag for better balance.

While standing in front of the motorcaddie, hold the front wheel and loosen the screw on the **right side** and move the wheel (very slightly, a little means a lot) in the opposite direction that it was tracking.

DO NOT LOOSEN BOTH SCREWS!

Tighten the screw back down and run the motorcaddie forward to check alignment. You may need to do this procedure several times in order to get the motorcaddie in alignment and track straight.



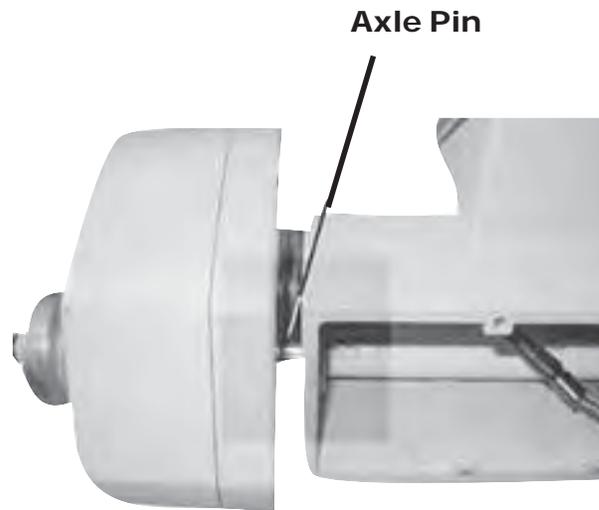
Once wheel has been moved to the desired location, **hold it in place** while tightening screw!

My motor is running, but the wheels aren't turning.

Do you hear any growling or grinding noise coming from the gearbox? If so, there may be broken or cracked gears in the gearbox that will need replaced. Return to Kangaroo factory (North Carolina) for repair.

WARNING: Don't open the gearbox or attempt to service the transaxle gear train. It is tuned at the factory to minimize gear noise. It also contains a special lubricant, which is sealed inside by a gasket.

If you aren't hearing any noise, then you may have a sheared axle pin. Ordering the pin from Kangaroo is simple and installation is easy. Authorized Service Centers can do this (for a charge), or it can be done at the Kangaroo factory, free if under warranty.



For quick instructions on how to check this axle pin, visit our Owner's Cyber Club at www.KangarooGolf.com/welcome.htm and apply for a username and password.

If the axle pin (shown in photo above) is **not** missing or sheared, the problem may be with a roll pin inside the gearbox that has sheared, loosened, or the motor pinion gear may be worn. In such cases your chassis must be returned to the Kangaroo factory for repairs.

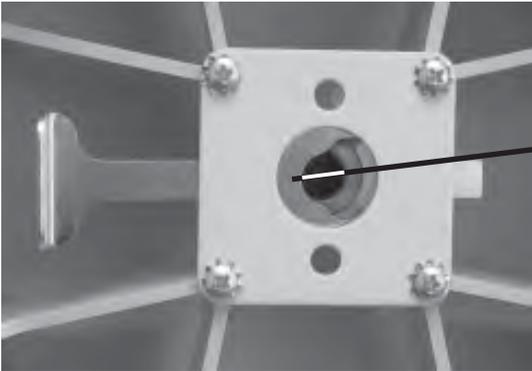


One of my rear wheels won't stay attached.

Switch your wheels (right to left, and left to right) to see if the same wheel comes off on the opposite side of your caddie.

Rear wheel won't stay attached regardless of which side of the caddie it is on.

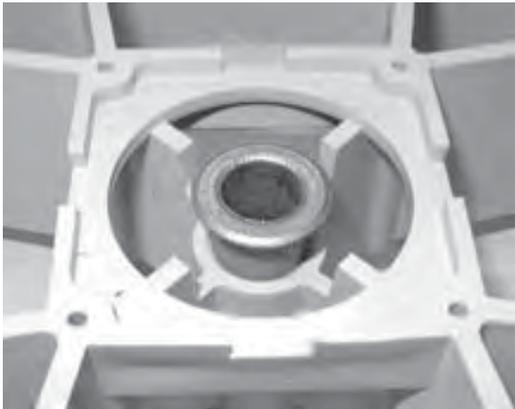
Check the center of the wheel plate to see if the wheel clip is as shown in the photograph below and on page 23, bottom right. There should be minimal wear. Also check to see if all four wheel plate screws and star washers are in place.



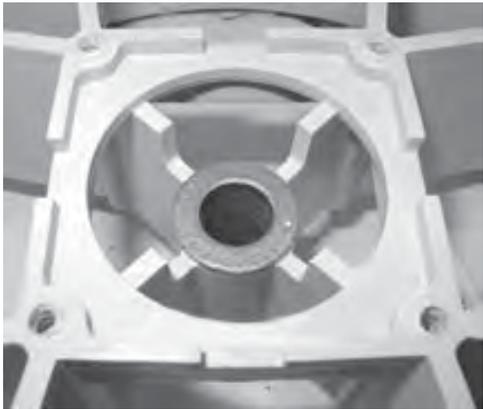
Minimal wear in this area

If all is fine with the wheel plate, check to see if the bronze bushing located in center of the wheel, beneath the wheel plate, is inserted as far down in the hole as it will go. If the bushing isn't seated into the hole completely, take a hammer and screwdriver and lightly tap the bushing back down to ensure it is seated in the hole as far down as it will go.

See Photos below. The plate, clip, and spring have been removed for better view, though the process can be accomplished with all parts in place.



Bushing Raised

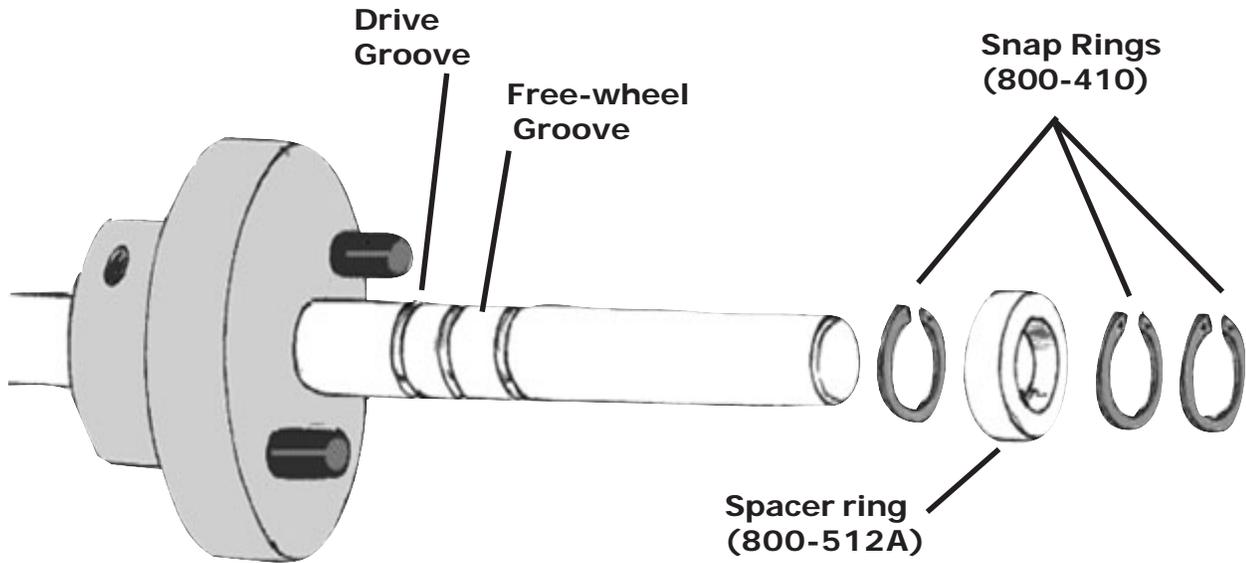


Bushing Seated

**Bronze Bushing
Part # 300-210B**

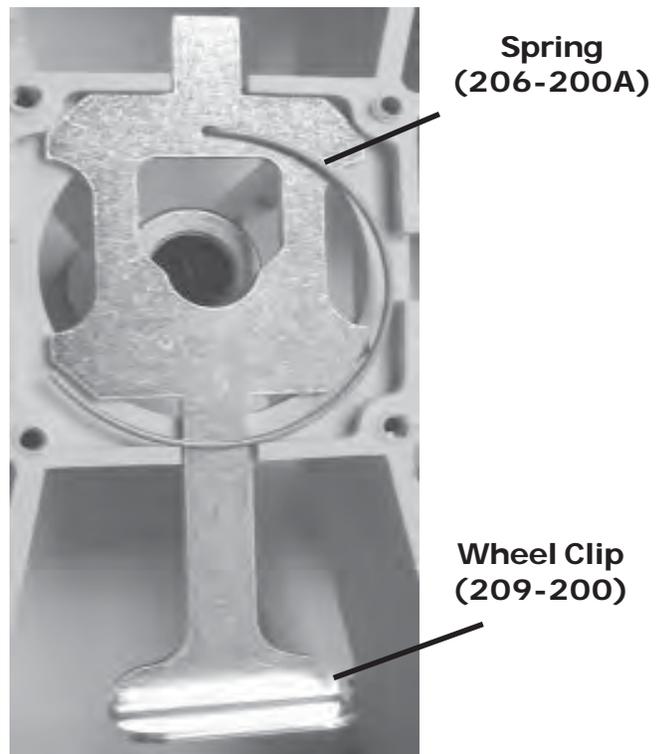
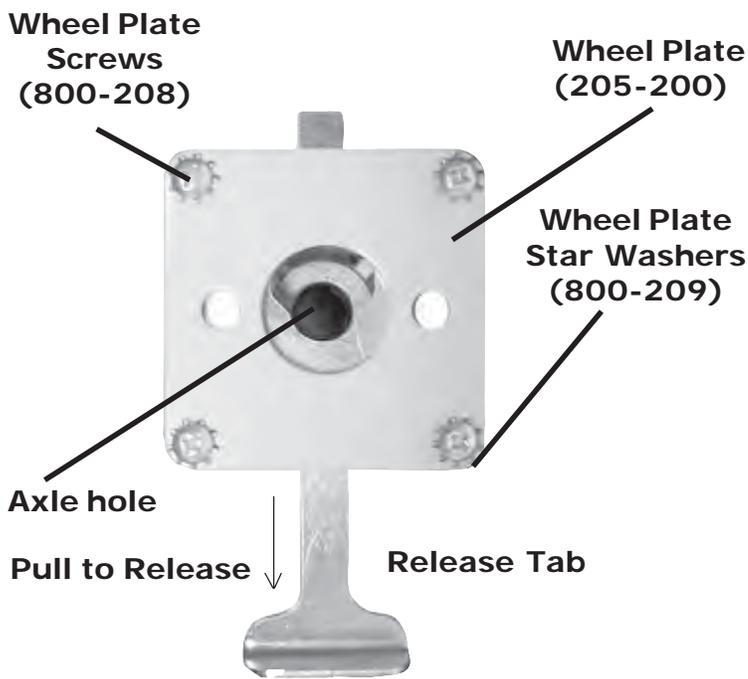
Rear Wheel falls off. Swapping wheels does not help. The wheel still falls off on same side of motorcaddie no matter which wheel is mounted.

Check the rings on your axle to ensure they are all there. Make sure none of the three Snap Rings are worn or missing.



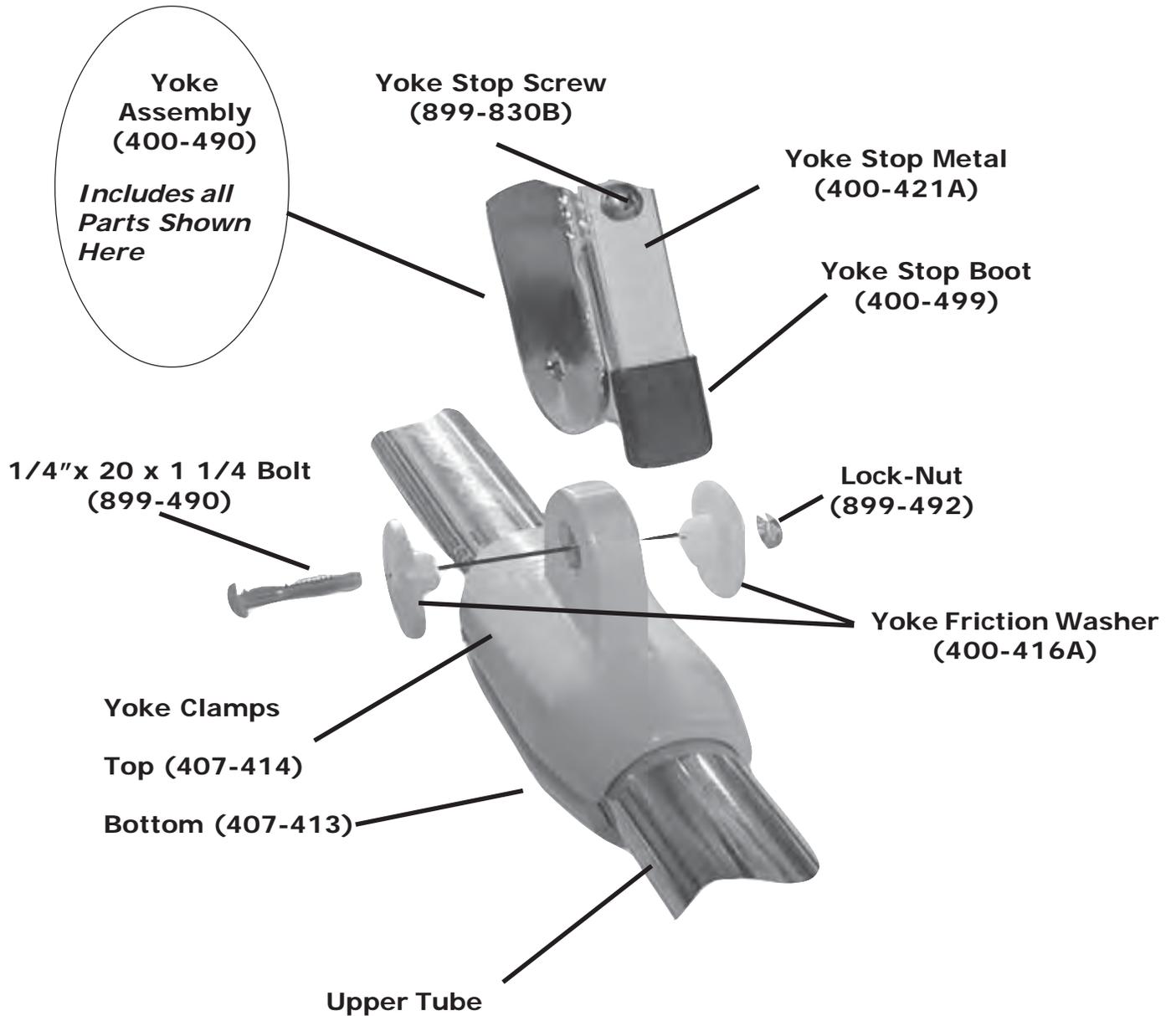
Axle rings all seem to be there and in place.

Next remove the wheel plate by removing the four screws and star washers. Check to make sure the Wheel Clip is seated correctly in the wheel, and the spring is in its proper place. See photo below for proper spring position/location.



My Upper Bag Support keeps falling down.

Is your yoke-stop broken? If so, you will need to order a new yoke stop. If your yoke stop isn't broken, check the screw to make sure it's tight. If the screw is broken off in the yoke, the fragment of the screw will have to be removed using an easy-out tool, or a new yoke will need to be purchased.



My Kangaroo Model 5 Stopped Running.

Did the motorcaddie die gradually as the round of golf progressed?

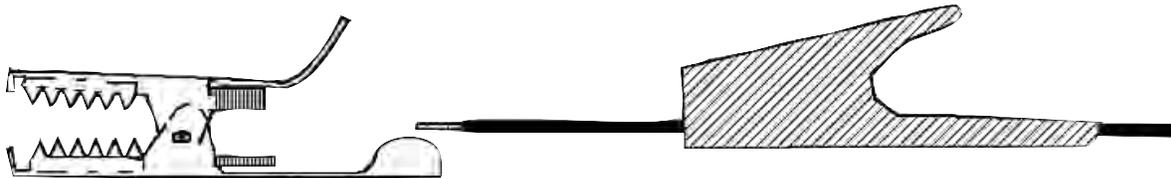
When the motorcaddie starts out with enough power and slowly diminishes toward the end of the round, it's probably your battery. If your battery is over a year old and fully charged, you may need to order a new battery. If you have doubts that your battery is the problem, try borrowing or swapping batteries with a friend.

My battery seems okay, but the motorcaddie was a little sluggish in the beginning of play then died during my round of golf.

Did the motorcaddie seem to be struggling on inclines? If so, reach down and touch the motor. If the motor is **HOT** to the touch, then your motor will need to be serviced or replaced. It is normal for the motor to be warm to the touch, but it should never get **HOT** to the touch.

Did the motorcaddie just stop all of a sudden during the round of golf?

First, review Controls operation in this manual (pages 7, 8). Check your battery wire clips. While standing behind the motorcaddie, wiggle them to see if the motorcaddie will power up while moving the wires. If it does, then you have a broken wire somewhere on your battery clips. To check your battery wires, open the crocodile clips and clip them on to an object 3/4" thick so they are held in the open position. Then slide the black/red rubber covers back to inspect the metal clip, solder joint and wire.



My motorcaddie stops and starts intermittently!

Check the plug on the control wire and the receptacle on the chassis. Make sure they are clean of any debris and that they are dry. Use "canned air" like the type used on computer keyboards to carefully blow out both the handle plug and the control receptacle.

Model 5

with AutoBrake

Manufactured in USA

