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Introduction

Thank you for purchasing a Catrike!

Please take a moment to read through this document, especially the sections on safety and riding tips. You may find that the most comfortable place to be while you’re doing this is sitting (stationary) on your trike!

Big Cat HPV was founded in 1999, when founder Paulo Camasmie emigrated from Brazil and worked with Steve Delaire of Rotator Recumbents to create a new tricycle design. This design lives on (in a somewhat altered form) as the Rotator Comfort 3.

In 2000, Paulo moved to Florida and started building the original Catrike Road. It shared a number of characteristics with the current Catrikes, such as light weight and a narrow track. Then, in 2001 the idea for what was to become the original Speed started to take shape. The production prototype was ready in time for Interbike 2002, and the first units started to ship in early 2003. The Speed represented something unusual in the recumbent industry: A high quality, high performance, aesthetically pleasing product that was also priced very reasonably.

The combination proved to be a great success and was well received by both the press and customers. Total Catrike production prior to the introduction of the Speed was approximately 80 units – typical for a small recumbent builder. In the first year of the Speed’s availability, almost 200 were built.

Building on the success of the Speed, a new Road was developed in 2003 and started shipping in early 2004. The Speed and the Road are actually very similar physically, and share many parts, but they have a different character. The Speed is sporty and very responsive, and is designed to appeal to performance-oriented riders. The Road has a more neutral handling feel and is designed to appeal more to recreational and touring riders.

We hope you enjoy owning and riding your Catrike!
Safety and riding tips

Safety tips
Riding safely depends on many things, from proper equipment to alertness to your attitude on the road. Above all, use common sense.

The ideal place to ride your Catrike is bicycle trails & paths. The Catrikes are probably the best choice in that setting. You will enjoy the view, relax and socialize. You will have the most comfort, piece of mind and fun. If you elect, however, to ride on streets, you will have to do it in your own risk and know that whether it is a regular bicycle, a recumbent or a tricycle you have to be very careful. Because a trike is so low to the ground you have to be extra careful with cars and trucks. Therefore you have to take a great care to make yourself visible. In part, you do this with equipment such as brightly colored clothing and helmets, use of the safety flag that comes with every Catrike, and also with blinking lights and reflective stickers. But you also have to ride in such a way that you engage the attention of motorists, making eye contact, signaling your intentions, being courteous, smiling and waving. You use your voice to get attention. You also pay a lot of attention when riding in traffic and you obey all traffic laws and rules of the road. The positive side is that recumbent bicycles are very much a novelty, and once you make sure that you are being seen, you generally find that motorists leave you more room and respect when you're on our Catrikes than they do when you're on upright bicycles. Nevertheless, always assume that they don't see you.

Reflective and high-visibility gear is great (and we use it all the time), but it's no substitute for lights when riding at night or in low-light conditions. The new super-high output LED rear lights are very effective. Any small headlight (those that look like flashlights) may be enough to help incoming motorists see you, but it's not sufficient to actually light your way. If you're going to ride at night, spend the money and get a good headlight.

While it may seem silly to wear a helmet on a low-slung tricycle, you should always do so. It's very hard to tip the trike over, but it can happen. Also, if you have a close encounter of the worst kind with a car or stationary object, chances are you won't stay on the trike. Always wear a CPSC-approved cycling helmet when riding your Catrike. A brightly colored helmet also helps motorists see you.

You're very low, and it's possible for road grit to get whipped up by the wind or kicked up by passing cars and hit you in the face. This is especially true in the spring in areas where sand is used on the roads in winter. It's a good idea to wear sunglasses to protect your eyes. You may also want to wear gloves. It's easy to reach the ground on your Catrike, and getting a palm full of sand and glass is no fun.

We strongly recommend the use of a mirror. Don't rely entirely on it. Turn and look before changing lanes or turning across the line of traffic.

Riding along a line of parked cars presents a particular danger for those on low-slung bikes and trikes. Motorists have a habit of opening their doors suddenly without looking behind them... and even if they do look, they're concentrating on looking for oncoming cars, not a low trike. When riding along a line of parked cars, look for occupants inside as you approach. If you see someone sitting in the car, give them a bit of extra room.

Pedestrians, too, often aren't looking where you are. Use caution when approaching crosswalks and use your bell, horn or your voice to alert those who may be stepping into the street.

Your Catrike has a fixed seat for several good reasons, and one of these is that it keeps the center of gravity where it should be for good handling. If you carry loaded panniers, avoid putting the weight too high and too far aft, or it can cause poor, even unsafe, handling.
Riding tips

If you don’t have experience with recumbent tricycles, you may find that for the first few rides you experience noticeable pedal steer (pushing hard on the pedals makes the trike swerve) and brake steer (pumping one brake harder than the other causes the trike to swerve). These two phenomena become much less noticeable as you gain experience. Pedal steer is minimized or eliminated by pedaling smoothly at a fairly high cadence, rather than mashing hard. Brake steer is minimized by braking smoothly and evenly…if the trike lurches under braking you’re overdoing it (it’s like driving your car…you don’t stand on the brakes every time you slow the car, rather, you learn to modulate the pressure so that the car does not lurch).

The smoothest, most enjoyable ride comes when you learn not to overcontrol the trike. The steering is very responsive, and does not require much input at all to make the trike change direction. The less you try to steer, the smoother the ride will be.

It’s possible to get the trike up onto two wheels, but this should be avoided. It puts a lot of stress on the components and can cause loss of control. Bicycle wheels, hubs and tires are not designed for heavy lateral loads, and if you go up on two wheels you’re asking them to do something they were never meant for. Your Catrike is wonderfully responsive and handles very well, but it’s possible to overdo it. Use common sense. You’ll find that the trike stays more firmly planted when going around a corner at speed if you lean to the inside of the turn.

The brakes on your Catrike are very powerful. It is quite possible to do a “stoppie” on the Catrike (lock the front wheels and lift the rear wheel off the ground by jamming on the brakes). In extreme cases, you can hit the chainrings on the ground. Use common sense. Don’t use maximum braking unless you really need to. At high enough speeds, the trike won’t lift the rear wheel. It will just skid. And at very low speeds, there isn’t enough momentum to hit the chainrings on the ground.

Brake Steering: Our frames are designed for diminished brake steer. However, keep in mind that the trike is not a heavy vehicle such as a car. It does not have hydraulic, electronic or self-correcting mechanisms either. It is instead a very light recreational vehicle with a mechanical steering linkage that carries a rider sometimes over 8 times its weight. Therefore the weight of the driver can sometimes control the capabilities of the vehicle. It does demand that the rider develops proper riding skills, such as smooth pedaling, smooth steering and smooth braking and that it is always conscious when riding. The Catrike has front brakes only, since in a braking situation 90% of the weight is transferred to the front of the trike. The front brakes are also independent, meaning that you can brake the front wheel only, or the left wheel only. Therefore, especially in high-speed downhill situations, it is mandatory that you pull both brakes at the same time and with the same intensity. If you elect to brake only with one brake, this could cause the trike to steer out of your path and cause serious injury or death.

Make sure the boom clamp is tight enough, so the boom will not twist while you pedal. Just like a bicycle seat post clamp, it is the rider’s responsibility to check for the boom clamp tightness. The boom clamp is designed for high pressure clamp action. It also included a plastic shim to be installed between the boom and the main frame for zero gap and increased clamping action. Make sure the plastic shim is correctly placed and that the boom clamp is tightened to avoid the boom to spin inside the frame. If for any reason, you are unable to install or tight the boom clamp enough, please don’t ride and contact your Catrike dealer or Big Cat HPV, LLC. Failure to do so might cause the boom to twist and cause serious injury.
Maintenance tips

Keep your trike clean...your tires scrub the tires a bit, so they may not last as long as they would if you were to wash and dry them properly. Use a soft brush. A soft brush will stretch a bit and settle in over time. It’s better to use a bucket of water, mild detergent, and soft brush.

Wearing your head on it all the time. The headrest is nice and soft, but it does transmit road vibrations. On the road, we find that we can ride all day without using the headrest as long as we put the chain on it in a position that lets you rest your head on it if you need to but which doesn’t force you to have your head on it all the time.

It’s not meant to be drum-tight...it’s meant to support you comfortably. Pull the straps tight from time to time when the pull the straps tight from time to time when the

Many new owners tend to over-lube the chain. It should not be dripping with lube. A properly lubricated chain looks dry and clean, and it will lose some pressure over time. Tires by nature will absorb the many and small as long as they would on a bicycle. Overly aggressive riding will shorten tire life.

2003 Speeds, mount front fender to boss on rear cap of main frame using M5x25 bolt and one M5 washer.

2004 Speed & Road, use M5x35 bolt, two 5MM flat washers (one on either side of fender) and the ¾” aluminum spacer.

For all trikes, the fender is supported by a wire brace which is attached to the M5 holes provided in the dropouts, using 2 M5x6 bolts & washers. The wires will need to be cut to length and then attached to the fenders according to the manufacturer’s instructions.

Rear Fender:

Front Fenders:

Important Notice for Fender Installation:

Before beginning trike assembly please note: The bar ends which are used to mount the fenders need to be installed before the grips or shift lever. The text for mounting the fenders follows. You can find pictures of the process the Catrike website at. Click on the link “Fender Set Mount Instructions”.

Front Fenders:

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Rear Fender:

To mount the front fender, the bar ends need to be installed just above the brake levers on the handlebars. If you are reinstalling fenders, the bar end shifters & grips will need to be removed first. (If you are reinstalling the shifters leaving both levers all the way forward before installing them.)

Install the bar ends with the clamp bolts toward the front of the trike and the stubs pointing slightly up. Set the angle so the bar ends point straight out on both sides. Install grips and bar end shifters.

**Those with 2003 Speeds may need only one bar end as some handlebars have a welded stub from the factory.

Next, install the clamp pins on the bar ends. You will need to use one short shank and one long shank in each clamp. Slip the clamp pins/shafts over the bar end with the tapped hole facing forward. Leave loose for now.

2003 Speed, 3mm over the M6x25 bolt, ¾” aluminum spacer. Use the provided M6x30 and M6 washer and allow you to mount two fender mounting holes to each axle. Be sure you get the axle caps and any spacers back on.

2004 Speed & Road, insert one ¾” button head screw and two washers (one on each side of the 2 holes). Attach fenders to bar end using M5x6 bolt and M5 washers. Cut to length and attach to fenders according to manufacturer’s instructions. Wires used to support fender can be bent by hand to adjust position of fender. After fender is centered over front wheel, tighten clamp bolt.

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Assemble instructions

**NOTE:** We are constantly working to improve our products, and changes may be introduced in the middle of a model year. Therefore, some photos and descriptions may not precisely match the actual product. The trike shown in these instructions is an early 2004 Speed.

Your Catrike comes disassembled, but don't worry; putting it together is quite simple. A rudimentary knowledge of bicycle mechanics helps, but is not essential. If you really don't feel qualified to tackle the job, take it to your local bike shop. They'll have no trouble putting it together (but please make sure they read these instructions, especially the section on setting the toe-in).

If you're already familiar with working on bicycles and are reasonably adept with tools, it should take you one or possibly two hours to fully assemble and adjust your trike.

When you open the box, your first reaction is likely to be that something must be missing. Worry not! The Speed is such a simple design that it often catches people off-guard.

Inside the box you'll find five separate items:

- The frame assembly, which is zip-tied to the boom, tie rod and all three wheels.
- A pair of boxes containing all other parts.
- A safety flag.

The first step is to inventory the parts. You should have:

- Main frame with all polymer kingpin bushings in place. The idler and chain tube also are preassembled and installed on the frame. The quick-release boom clamp is also installed.
- Boom with bottom bracket (BB) and crankset installed.
- Two front wheels with tubes, tires and brake discs installed.
- One rear wheel with cassette installed.
- One tie rod with polymer end-end bearings and jam nuts installed.
- One crankset with chainrings installed.
- Seat mnt.
- Front and rear derailleurs.
- Rear derailleur hanger with bolt installed.
- Brake cables and two lengths of brake cable housing.
- Cable ferrules and cable ends.
- Three chains with PowerLink master links.
- Two kingpin/axle assembly with brake calipers, tie rod bolts with spacers and hollow axles with retaining rings installed.
- Two handlebar assemblies with shifters, shift cables, shift cable housings, grips and brake levers installed.
- Grey plastic boom shim (3.55 x 3.0 x .031” thick).
- Quick-release wheel skewer.
- Safety flag.

Other optional accessories such as a mirror, headrest or fenders may also be in the box.

**Tools required**

To put your Catrike together, you'll need:

- A set of metric Allen wrenches.
- A small adjustable wrench. We strongly recommend against the use of pliers to hold and turn nuts. It only serves to frustrate you and destroy the nut.
- The axle bolt installation tools included with your Catrike. Should you lose or misplace these tools, any piece of metal about 1/8” thick will do… the back of the blade of a table knife will work, even a house key, for example. All that's important is that it fit in BOTH slots in the bolt and be large enough to grip with your hand.
- A bicycle chain tool.
- A small screwdriver (to adjust the derailleurs).
- Bicycle cable and housing cutter (beware wire snips tend to flatten and mangle the end of the cable; you can get by with a good sharp pair, but it's much better to buy the cable and housing cutter you'll use often in the future). Also very good to have but not absolutely mandatory are:
  - Anti-seize compound (available at any automotive store).
  - RTV or silicon sealant is recommended instead of thread-lock compound as the strong bond of thread-lock can easily damage aluminum threads.
  - Electrician's tape (use a name brand).
  - Zip ties.
  - Bicycle pedal wrench (you can use your adjustable wrench, but a proper pedal wrench is a good thing to have).
  - "Fourth hand" tool (a cable stretcher… handy for holding the cable while you make derailleur and brake adjustments).
• A good bicycle maintenance book. There are many excellent ones out there…pick your favorite.

• Sharpie indelible marker (to mark the location of the boom once it’s adjusted to fit you).

IMPORTANT NOTE!
The frame and many other parts of your Catrike are made of aluminum. It is VERY easy to strip aluminum threads, especially if steel fasteners are going into them. BE CAREFUL not to cross-thread or overtighten any fastener!

TIP: An easy (albeit rough) way to estimate the proper tightness for aluminum fasteners is to use two or three fingers on the wrench, no more. The limit is the amount of force you can apply to the tool before your fingers slip off. Use two fingers for small fasteners, or three for larger ones.

Because we have no control over how tightly you assemble your Catrike, it is extremely important for you to re-check all of the threaded fasteners (pedals, axle bolts, and all other nuts and bolts) on the trike after you’ve ridden it for a couple of hours. Periodic checks during the sitting season are also a good idea. Virtually all of the trouble reports we receive are nothing more than fasteners that have worked loose.

• Insert the derailleur hanger into its recess on the right dropout and tighten the bolt.

Look at the writing on the brake discs. At least one of them will have a marking that says “DIRECTION OF ROTATION.” This will tell you which wheel it is (just remember that the brake disc goes on the inside of the wheel). This photo shows the right wheel.

The kingpin assembly can be identified by looking at the brake calipers. The left-hand assembly has the brake caliper on top, and the right-hand has the brake caliper underneath. All axles have right-hand threads so there is no difference between a right or left axle. Note: Early versions had right & left hand thread axles & nuts.

Both axles have Right Hand Thread (Early versions of the Catrike had right and left hand thread axles & nuts).

Unscrew the axle bolts, remove them and the retaining washer from the end of the axle tube, and slide the axle tube out of the back of the kingpin assembly.

Loosen the brake caliper adjustment bolts. This will let the caliper float free while you’re mounting the wheel.

Now you can place the wheel in position, sliding the disc into the brake pads. Place the wheel hub opening directly over the axle, then slide the axle through the hub from behind the kingpin assembly (the bolt and its retaining ring go on the wheel, make sure you don’t slide the axle in backwards).

• Insert the quick release into the rear wheel, put the wheel into the dropouts, tighten and close the quick release.

• Attach the front wheels to their respective kingpin assemblies and steering arm assemblies. First you need to identify the left and right kingpin assemblies and the left and right wheels.
Place the cone-shaped retaining dog (flat side in) against the hub, thread the axle bolt in and snugly hand-tighten it using an appropriately sized piece of metal (a chainring bolt tool fits perfectly...the back of the blade of a table knife also works well).

**IMPORTANT SAFETY NOTE!**

These bolts hold the wheels on, so it’s VERY important that they be kept secure. Check them (front to back) We recommend using a small amount of RTV or silicone sealant on the last few threads to keep the axle nut from vibrating loose. As the RTV will resist vibration nuts installed in this manner will need to be tightened excessively to keep them in place. Sufficient torque can be applied using the provided axle tool.

- Next adjust the calipers. One of the nice things about the Avid disc brakes on your Catrike is that they are very easy to adjust:
  - If the caliper mounting bolts have been tightened, loosen them.
  - Adjust the brake pads, use the knurled plastic adjuster knobs on either side of the caliper until the pads are firmly contacting the rotor. First screw the larger knob (the one closest to the wheel hub) in until the disc is offset slightly away from the wheel hub. Then screw the smaller knob in until the rotor is held tightly.
  - Tighten the caliper mounting bolts.
  - Back off the pad adjuster knobs until the disc spins freely and without noise...about 1/2 turn each.

The wheels should now spin freely. If you hear any noise, back off the adjusting knobs a bit more until it goes away.

- Now you can install the kingpin assemblies. Line up the small metal plate on the kingpin hole with the small plate on the handlebar. Tighten the pinch bolts on the handlebar to hold the kingpin in place.

Before you attach the handlebars, set the brake to its wheels to make sure the kingpins are fully seated. Loosen the pinch bolts on each handlebar and slide each handlebar onto its corresponding kingpin and tighten. The handgrips should be behind the kingpins and outboard of them, between the kingpin and the tim. You’ll know you have it right if the shifters point forward and the brake levers are in line with the centerline of the trike. The position of the gaps can be adjusted in circuit if you wish, but make sure you re-align the shifters and brake levers.

- Next, install the tie rod. The rod goes under the seat, across the main frame tube, and bolts in place on top of the small plates on the kingpin assembly. Note that one of the bearings is reverse-threaded...this is important.

If you disassemble the tie rod, make sure you use the right jam nut and attempt to thread the wrong bearing into the rod will strip the threads.

Take the tie rod and turn the jam nuts all the way out towards the rod-end bearings. If they aren’t already, then screw the rod-end bearings in as far as they’ll go. Locate the tie rod bolt on each kingpin assembly. Hold the locknut with an adjustable wrench and remove the bolt, spacer and washer.

Bo to each end rod bearing to its kingpin assembly, placing the ball of the rod-end bearing on top of the kingpin plate. The washer goes between the nut and the steering arm. The bolt goes in from the top, and the nut goes under the plate. Tighten everything snugly.

**TIP:** This is one of the few places on the Catrike where a steel bolt is threaded into a steel nut. The caution about the ease of stripping threads does not apply here.

**IMPORTANT SAFETY NOTE!**

The tie rod bolts should be kept tightened securely. If they get loose, the steering will get sloppy and the wheels may shimmy under certain circumstances. If the bolts fall out, loss of control could result. Check them (front to back)...

- Next install the brake cables. This is done by threading the cable through the brake lever and fitting the small metal cylinder on the end into the recess in the lever. Screw the barrel adjusters on the bottom of the levers almost all the way in (they’ll be used later to take up slack during brake adjustment).

The procedure for the left and right brake is the same. Slide the brake cable housing on (the shorter one is for the right brake). You should have eight cable ferrules. Four are for the brake cable housings. Thread the cable through a ferrule, then through the housing, then through another ferrule.

The right brake cable goes straight from the lever to the brake. The left cable goes in front of the tie rod, then loops around the tie rod before going to the brake caliper.

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Thread the end of the cable through the fittings in the brake actuating arm. The ferrule fits under the rubber boot. Loosen the cable clamp bolt, put the cable under the clamp plate, pull it taut and retighten the bolt. Using a bicycle cable cutter (preferred) or SHARP pair of wire cutters, cut the brake cable so that a few inches (enough to grab with your hand) extends beyond the clamp bolt.

**IMPORTANT SAFETY NOTE!**
The end of the cut cable MUST be sealed, or it will fray and cause a serious safety hazard. Those wires are sharp! Clip on one of the included cable ends.

**TIP:** If you run out of cable ends, and can’t get to a bike shop for some, you can use a drop of cyanoacrylate glue (Krazy Glue), some epoxy or a blob of solder to seal the cable ends.

- Adjust the brakes by first pulling hard on both brake levers to seat the cables. Turn the barrel adjusters out until the levers do not bottom out when the brakes are applied fully. If you cannot see the brakes using the barrel adjusters, you’ll have to take up more slack in the cable by loosening the clamp bolt and pulling the cable tighter. Screw in the lock nuts on the adjusters.

If the brake makes noise or clicks, adjust the caliper position and/or the brake pad relif using the caliper mounting bolts and pad adjusting knobs.

- Install the boom on the main frame tube. Be sure to place the plastic sleeve between the main frame tube and the boom. The plastic sleeve referred to is 6” x 5-1/2” polymer sheet. It is installed with the 6” dimension (the long side) running forward and backward along the boom. If you install it with the long side around the boom it will cause the boom to be much too tight to turn, but you manage to force it into the frame.

Note that 2003 and early 2004 Catrikes (like the one pictured in these instructions) have a boom that slides over the main frame, held in place by two pinch bolts. Newer models have a boom that slides inside the main frame tube, with a collar with a quick-release.

When you install the boom, make sure the plastic sleeve is properly placed, flush with the end of the frame under the collar (newer models) or flush with the end of the boom tube (older models).

Once the boom is in place, tighten the quick-release (or pinch bolts) only enough to keep it from slipping; you’ll adjust it later.

**IMPORTANT SAFETY NOTE!**
Never lubricate or wax the part of the boom that slides inside the frame. This can cause it to slip. Once it’s adjusted, make sure it’s tightened enough to avoid slipping under power.

- Install the rear derailleur by bolting it in place.

- Run the shifter cables. Cable guides have been provided on the boom and seat frame stay. The actual routing is not important, as long as sharp bends are avoided. The recommended routing for the left side (front derailleur cable) is to run the cable between the seat frame and the seat mesh (not yet installed) from behind before running it forward. Likewise, run the rear derailleur cable between the seat frame and the mesh from the front.

**TIP:** Using anti-seize compound on the pedal threads will make future disassembly much easier and will help prevent damage to the threads in the crank arms.

**IMPORTANT NOTE!**
The left pedal is reverse threaded. Make sure you don’t try to install the pedals backwards, or you might strip the crank threads. Your pedals will be clearly marked so you can tell which is which.

**TIP:** If you run out of cable ends, you can use a drop of cyanoacrylate glue (Krazy Glue), some epoxy or a blob of solder to seal the cable ends.

- Install your preferred pedals. We recommend that you use clipless pedals. They’re not only safer, they’re far more convenient and comfortable than using plain pedals.

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- Install the seat mesh. Lay the mesh out to get your bearings. The upper edge of the seat has two straps and buckles. The sewn-in sleeve for the flag goes on the left side of the seat. Place the seat mesh over the frame and thread the straps into the buckles. Note that there’s a right way and a wrong way to thread the straps into the buckles. If it’s easy to tell if you’ve done it wrong: it won’t hold tension.

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- Install the seat mesh. Lay the mesh out to get your bearings. The upper edge of the seat has two straps and buckles. The sewn-in sleeve for the flag goes on the left side of the seat. Place the seat mesh over the frame and thread the straps into the buckles. Note that there’s a right way and a wrong way to thread the straps into the buckles. If it’s easy to tell if you’ve done it wrong: it won’t hold tension.

**TIP:** Using anti-seize compound on the pedal threads will make future disassembly much easier and will help prevent damage to the threads in the crank arms.
First thread the straps on loosely and position the seat mesh so that its square on the frame, with the cutouts for the lower seat support tubes positioned properly. Tighten all of the buckles as tight as you can with your hands. You will find that when you sit on the seat, the mesh will loosen a bit and the buckles will slip or the mesh will shift a bit.

This is normal. Adjust the position and re-tighten as needed. The seat mesh will stretch a bit at first, so keep the straps on loosely, but will soon break in and stop moving. The front of the Catrike seat.com is formed from the mesh, cradling and supporting your body, so it is okay if the buckles slip a bit as they find their preferred tension. Trying to keep them clamped tightly is not only futile (because of the way the buckles work under load), it’s not as comfortable as letting them support your body fully.

It is normal to have a small wrinkle on the seat tubes at the base of the seatback.

• Sit on the trike, wearing shoes like those you’ll have on when riding, and adjust the boom length. This is done by loosening the boom release enough to allow the boom to move, then putting your footstep on one pedal and extending your leg fully (the boom will rotate…just move it back to vertical with your hand). You should be able to lock your knee, but not have to lock your knee. You can fine-tune the position later. Retighten the boom release (or pinch bolts) enough to keep the boom from slipping.

Humans are capable of producing some incredible power for very short periods of time when accelerating from a dead stop. If your boom is not clamped tightly enough, it will rotate and slip forward.

• Using a chain tool, assemble the three separate lengths of chain and install it. The powerside (upper run) goes under the idler, between the main cross member and the tie rod, and over the top of the chainrings. The return side (lower run) goes through the chain tube.

TIPS: It’s easier to thread the chain if you immobilize the crank. This can get pretty messy! Protect your work surface and keep paper towels handy. It’s easy to thread the chain through the rear derailleur incorrectly. Make sure the chain runs cleanly through it, and not over the retaining tabs.

Adjust the chain length. To do this, shift onto the largest cog on the rear and the largest chainring on the front. Pull the chain taut, so that the rear derailleur is fully extended. Then add two links. That will be close to the ideal length for the chain. Use the included PowerLink to hold the chain together.

If your Catrike will be used by more than one person, feel free to use two PowerLinks so that the chain can be easily adjusted for other riders: simply set the take up for the shorter rider, then insert a piece of chain long enough to accommodate the taller rider. This short piece of chain is between two PowerLinks, adjusting the take up should take only a couple of minutes. It’s a good idea to mark the boom for both length and orientation for each rider using a Sharpie marker, so that the setting can be repeated easily.

Just to be clear on what we mean by “two links,” check the photo. Don’t forget that the PowerLink counts as one link.

There’s a trick to opening a PowerLink that seems to elude many people. First hold the link between your thumb and forefinger, and push the plates together (towards one another). Then slide them in opposite directions, as if you were snapping your fingers. Opening a PowerLink should be easy…if you find yourself reaching for a pair of pliers, you’re not doing it properly.

If you’re using a pair of pliers, you may not have the proper tension. It’s easier to work on a chain under tension if you create a loop of slack and hold it in place with a stiff bent wire made from an old spoke or wire coat hanger.

TIP: It’s easier to work on a chain under tension if you create a loop of slack and hold it in place with a stiff bent wire made from an old spoke or wire coat hanger.

Now you can adjust the derailleur. Your Catrike should have shipped with instruction sheets for both the front and rear derailleur that describe this process. It will also be described in any bicycle maintenance book.

• Fill the tires to the recommended pressure (you can find this on the sidewall of the tire).

You’re almost ready to ride! Only one more thing to do, and it’s a very, very important adjustment: Toe-in.

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• Any vehicle with left and right wheels has a setting called "toe." This refers to the extent to which the front wheels point towards one another. Toe in means that the front edges of the wheels point inward slightly. Toe out means they point outward slightly.

The purpose of toe is to keep the steering nice and tight. All bearings and linkages inevitably have a little slop in them. By applying a bit of force to the entire system, it's possible to remove that slop. But too much toe and you cause the tires to scum because they're pointing far off the line of travel. This causes premature tire wear and increased rolling resistance. What you're looking for is just a little bit of toe.

To adjust the toe, simply loosen the rod end jam nuts rotate the tie rod by rolling it between your fingers. The rod end bearings are threaded in opposite directions, so rolling toe in will make the rod longer (more toe in) and rolling it the other way will make the rod shorter (toe out). The direction in which the rod rotates depends on which way it was installed, and is not important. The adjustment is sensitive; a quarter-turn is about all that's needed to get from zero toe to correct toe. When you have the toe set correctly, use an adjustable wrench to tighten the jam nuts against the ends of the tie rod tube. We recommend the use of thread-lock compound on the tie rod end threads to keep the jam nuts from vibrating loose.

- Attach the flag. The seat mesh is fitted with a sleeve that you can use to hold the flag. Some riders prefer not to use this, however, because the flag is not held vertically. If you prefer, you can use the steel bracket that comes with the flag. The best way to fit this is inside the left rear dropout, with the flanges facing the centerline of the wheel. You may wish to remove any rough edges from the bracket with emery cloth or a file to prevent scratching the frame's finish.

- You're done! Put on your helmet and go have some fun!

! IMPORTANT NOTE!
It is normal for cables and assembled parts to settle and "bed in" during the first several days of riding. It is important to go over the bike carefully during this break-in period and adjust anything that needs be adjusted. This will ensure that the bike handles well during your ride.

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### Specifications

**Specifications – 2004 Catrike Speed**

- **Weight:** 28 lbs. (w/o pedals or optional headrest)
- **Footprint:** 31”x70” (approx.)
- **Wheelbase:** 940mm (37”)
- **WheelTrack:** 685mm (27”)
- **TotalWidth:** 787mm (31”)
- **SeatHeight:** 190mm (7”)
- **SeatAngle:** 37 Degrees From Horizontal
- **Bottom Bracket Height (ave.):** 355mm (14”)
- **Wheels:**
  - Front: 16” (406), 20mm Disc Hub With Hollow Alloy Axle
  - Rear: 20” (406), 20mm Disc Hub With Hollow Alloy Axle
- **Turning Circle:** 13 Feet (Outside Axle to Outside Axle)
- **Turning Radius:** 78 Inches
- **Gear Inch Range:** 17” To 98”

**Components**

- **Truvativ Elita Triple Crankset:** 165mm Black 30-42-55T chainrings
- **Truvativ Isis Drive Hollow Bottom Bracket**
- **Shimano Tiagra Front Derailleur**
- **Dura Ace Bar End Shifters**
- **Avid Ball Bearing Disc Brakes w/Avid Brake Levers**
- **Sram 7.0 11-34 9sp. Cassette**
- **Deore Rear Derailleur**
- **Sram PC-59 Chain**
- **Primo Comet tires w/Kevlar Belt**
- **Finish:** Powder Coated Silver With Clear Coat
- **Seat Color:** Blue

### Specifications – 2004 Catrike Road

- **Weight:** 31 lbs. (w/o pedals or optional headrest)
- **Footprint:** 31”x70” (approx.)
- **Wheelbase:** 940mm (37”)
- **WheelTrack:** 685mm (27”)
- **TotalWidth:** 787mm (31”)
- **SeatHeight:** 254mm (10”)
- **SeatAngle:** 43 Degrees From Horizontal
- **Bottom Bracket Height (ave.):** 355mm (14”)
- **Wheels:**
  - Front: 20” (406), 20mm Disc Hub With Hollow Alloy Axle
  - Rear: 20” (406), 20mm Disc Hub With Hollow Alloy Axle
- **Turning Circle:** 14 Feet (Outside Axle to Outside Axle)
- **Turning Radius:** 84 Inches
- **Gear Inch Range:** 17” To 98”

**Components**

- **Truvativ Elita Triple Crankset:** 165mm Black 30-42-55T chainrings
- **Truvativ Isis Drive Hollow Bottom Bracket**
- **Shimano Tiagra Front Derailleur**
- **Dura Ace Bar End Shifters**
- **Avid Ball Bearing Disc Brakes w/Avid Brake Levers**
- **Sram 7.0 11-34 9sp. Cassette**
- **Deore Rear Derailleur**
- **Sram PC-59 Chain**
- **Primo Comet tires w/Kevlar Belt**
- **Finish:** Powder Coated Cobalt Blue
- **Seat Color:** Black
Catrike Limited Warranty

Big Cat HPV, LLC warrants Catrike tricycle frames and steering components against defects in material and manufacturing for the life of the tricycle, while owned by the original retail purchaser. The limited lifetime warranty on the frame and steering components does not apply to the paint/finish; this is covered under the limited 1-year warranty. Warranty coverage on Catrike proprietary components (excluding tires, tubes and cables) extends for one year while owned by the original retail purchaser. Warranty coverage of non-proprietary components will be voided by the warranty holder if they are used or altered in any manner different from what they were not designed, including but not limited to any non-standard use, and being improperly maintained. Proof of purchase is required for warranty claims to be valid. The warranty is valid for the original purchaser only and is non-transferable.

This warranty does not cover:

Normal wear and tear.

Any damage, failure or loss caused by accident, misuse, neglect, abuse, theft, or failure to follow instructions or warnings in the owner’s manual.

Any damage, failure or loss caused by use of tricycles for stunt riding, sand piling, acrobatics, or other non-standard activities, or in any other manner in which they were not designed. Bending of frame, forks, handlebars, seatposts or wheels, or a change in their functionality may be a sign of abuse or failure.

Any damage, failure or loss caused by the use of tricycles, not intended for such use, as power driven vehicles.

The original owner shall pay all labor charges in connection with the repair or replacement of all parts. Under no circumstances should this limited warranty include the cost of shipment or transportation to or from an authorized Catrike dealer or Big Cat HPV.

Useful product life cycle

Every Catrike tricycle and frame set has a useful life cycle. This useful life cycle is generally the time that Big Cat HPV will replace the product if this becomes necessary. When Big Cat HPV provides a limited warranty, this does not guarantee that the product will last forever. The length of the useful life cycle will vary depending on the riding conditions and care the tricycle receives. Competition, jumping, downhill racing, and care the trike receives. Competition, jumping, downhill racing, and care the trike receives.

Warranty coverage is conditioned upon the tricycle being assembled and adjusted correctly, being operated under normal conditions and use, and being properly maintained. Warranty coverage of non-proprietary components will be voided by the warranty holder if used or altered in any manner different from what they were not designed. Bending of frame, forks, handlebars, seatposts or wheels, or a change in their functionality may be a sign of abuse or failure.

Procedures

Warranty service will be performed by Big Cat HPV or an authorized Catrike dealer. Proof of purchase must be provided. Transportation to and from the authorized Catrike dealer is the responsibility of the purchaser.

Big Cat HPV will have the option of either repairing or replacing any part that is found to be defective, free of charge, for a period of time that is equal to the purchase price of this product.

In the event Big Cat HPV elects to replace a defective frame or fork, a new frame or fork will be provided. The new frame or fork may not be the exact model purchased, Big Cat HPV is not responsible for dealer labor charges for component changeovers when a frame or fork is replaced after one year from the date of original retail purchase.

If you elect to repair a defective product yourself, or use the services of a mechanic other than a Catrike authorized dealer, you may not use any replacement parts supplied by Big Cat HPV.

If you have a problem, contact your Authorized Catrike Dealer. Proof of purchase is required. Or contact Big Cat HPV at:

Big Cat HPV, LLC
720 Business Park Blvd, Suite 22
Winter Garden, FL 34787
USA
Phone: (407) 905-0626
Fax: (407) 905-0820

http://www.catrike.com

This warranty gives you specific legal rights and you may have other rights which may vary from state to state.