

## **BICYCLE SAFETY FACTS**

- Wearing a CPSC approved helmet will substantially reduce your risk of serious head injury.
- Riding at night will substantially increase your risk of serious injury. If you do, use headlights, taillights and reflectors for visibility.
- Always wear bright colors and reflective stripes to increase your visibility to cars, especially at night.
- Always ride with traffic to avoid collisions with oncoming cars. Use bike lanes where available.
- Before riding, check your attachment to front wheel, especially the quick release. Check your brakes. Wet weather will increase stopping distances.
- Obey all traffic laws and learn the Rules of the Road.
- Always use hand signals to indicate the direction of turn: Up for right, Out for left and Down to slow.
- Please read the owner's manual for additional safety information. Pay close attention to Appendix E (children) and Appendix F (traffic rules) in your owner's manual for in-depth safety practices.

## APPENDIX E

### Teaching Your Child The Rules

In addition to *The Basics* (page 7), *Riding Safely* (page 8), *Off Road Safety* (page 8), *Wet Weather Riding* (page 9), *Night Riding* (page 9), *Extreme, Downhill, Stunt, or Competition Riding* (page 10), and *Bicycling in Traffic* (Appendix F - page 41), kids need to be taught — **and to have frequently reinforced** — the following rules and lessons which adults are already expected to know. We urge you to take the time to familiarize yourself with these rules and to teach them to your child before you let your child ride unsupervised.

#### 1. Rules

- No playing in the road or in the street.
- No riding on busy streets.
- No riding at dawn, dusk or at night.
- Stop for all STOP signs.
- Ride on the right of traffic.

#### 2. Lessons

The lessons that follow relate to some of the most common real situations that children encounter when riding their bikes. Go over these situations with your child and make sure the lesson objective is accomplished.

##### a. Driveway Rideout

When a youngster rides out of the driveway and is struck by a car, that is called a rideout accident. What can you do? First, realize the danger of your own driveway. If there are obstructions to the view of passing motorists (like bushes or trees), trim them back. You might park your car in front of the driveway, if local ordinance permits. This way, your child can't use the driveway as a launching pad. But the most important thing you can do is teach your child about driveway safety. Take your child outside to the driveway and have him/her practice the following steps:

- 1) Stop before entering the street.
- 2) Look left, right and left again for traffic.
- 3) If there's no traffic, proceed into the roadway.

##### b. Running the Stop Sign

Car/bike crashes can happen when a cyclist runs a stop sign. Most cyclists who get hit riding through stop signs know that they were supposed to stop. They just thought it would be OK this time; or they may have been distracted. The thing to impress upon your child is that while he/she may not get hit every time, running stop signs will eventually result in an accident. What can you do? Take your child to a stop sign near home. Explain what it means by emphasizing the following points:

- 1) Stop at all stop signs, regardless of what is happening.
- 2) Look in all directions for traffic.
- 3) Watch for oncoming cars making left turns.
- 4) Watch for cars behind you making right turns.
- 5) Wait for any cross traffic to clear.
- 6) Proceed when safe.

*In order to make this lesson stick, you may have to change your own driving habits. If you creep through intersections controlled by stop signs, you are showing your child that you don't really believe what you preach. For your child's sake, stop at stop signs.*

##### c. Turning Without Warning

Another major accident type involves cyclists who make unexpected left turns. They neither look behind for traffic, nor do they signal. The key factor here is neglecting to look to the rear. If the cyclist had looked, he/she would have seen the danger coming up from behind. What can you do? Of course, you ought to teach your child not to ride across busy streets — at least until the child has had some advanced training and is old enough to understand traffic. But in the meantime, for residential street riding, you can teach your child to always look and signal before turning left. A big part of this lesson is teaching the child how to look to the rear without swerving. Take your child to a playground or a safe area away from traffic or obstructions to practice riding along a straight line while looking behind. Stand alongside and hold up a different number of fingers on your hand after the child rides by. Call his/her name. After 15 minutes of practice, a ten year old should be able to look behind his/herself and identify how many fingers you are holding up — without swerving.

##### d. Riding at Dawn, at Dusk or at Night (See also Section 4.F, page 19)

Most car/bicycle accidents happen at night where an overtaking car hits a bike. (An overtaking car is one that comes up from behind and passes the cyclist on the left.) These overtaking accidents can be very serious. What can you do? First, you should keep your youngster from riding at dawn, dusk or at night. It requires special skills and equipment. Few children have either. Secondly, make sure your child understands that if he/she gets caught out at dusk or after dark on a bike, the thing to do is to call you for a ride home. One suggestion is to tape a phone number and money to the bike so that, in an emergency, the child will be able to call home.

##### e. Following the Leader

There is increased risk of car/bike collision if children are following each other, because if the first one does something dangerous, those following may do it too. What can you do? Teach your child to always assess the traffic situation for him/herself. When a group is riding around, each cyclist should stop for stop signs; each cyclist should look to the rear before making left turns; and so on. One way to get the message across is to play a game with the child similar to 'Simon Says'. In this game, however, the emphasis should not be on doing what 'Simon Says', but rather have the child make a decision based on the situation. The child should learn to ignore what 'Simon Says'. Children need to learn to think for themselves to ride safely.

## SUMMARY

Teach your child early — the earlier the better. Learning skills such as looking and avoiding hazards takes time. Be prepared to repeat lessons until your child understands what you're trying to get across. Be patient. Your efforts will be rewarded, knowing that your child is aware of safe riding skills.

# ASSEMBLY GUIDE

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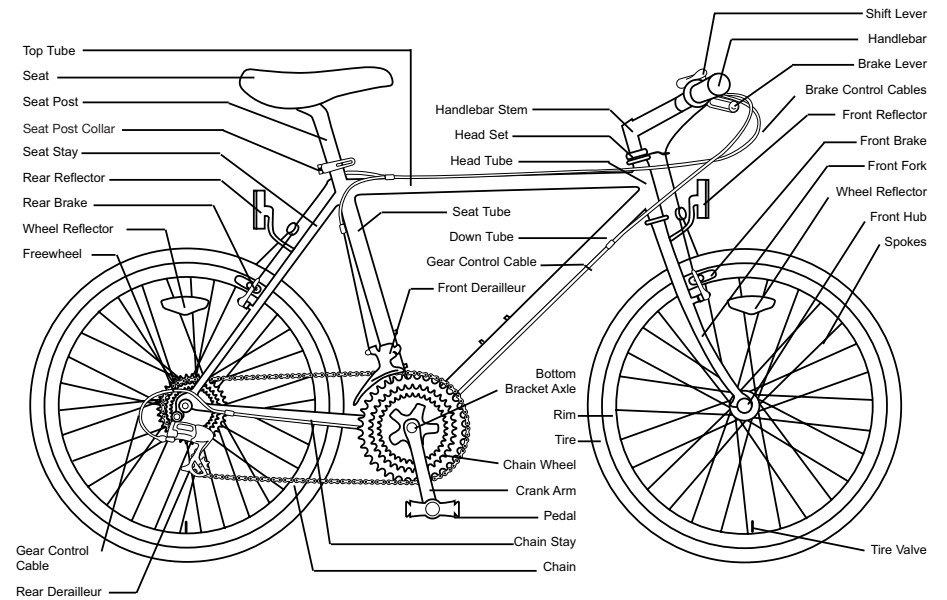
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# PARTS IDENTIFICATION GRAPHICS

## MOUNTAIN BICYCLES:

Mountain bicycles are designed to give maximum comfort over a wide variety of road surfaces. The wider handlebars and convenient shift lever position make them very easy to control. Wider rims and tires give them a softer ride with more traction on rough surfaces. The frame and fork on mountain style bicycles are generally much sturdier than those on racing style bicycles.



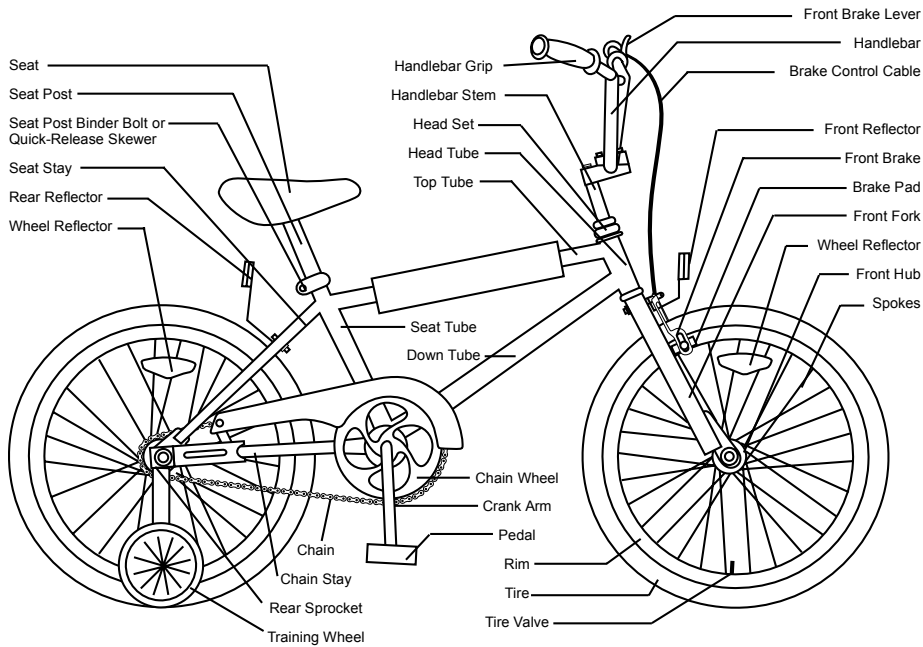
## WARNING / CAUTION

Take notice of this symbol throughout this guide and pay particular attention to the instructions blocked off and preceded by this symbol.

# PARTS IDENTIFICATION GRAPHICS

## YOUTH BICYCLES:

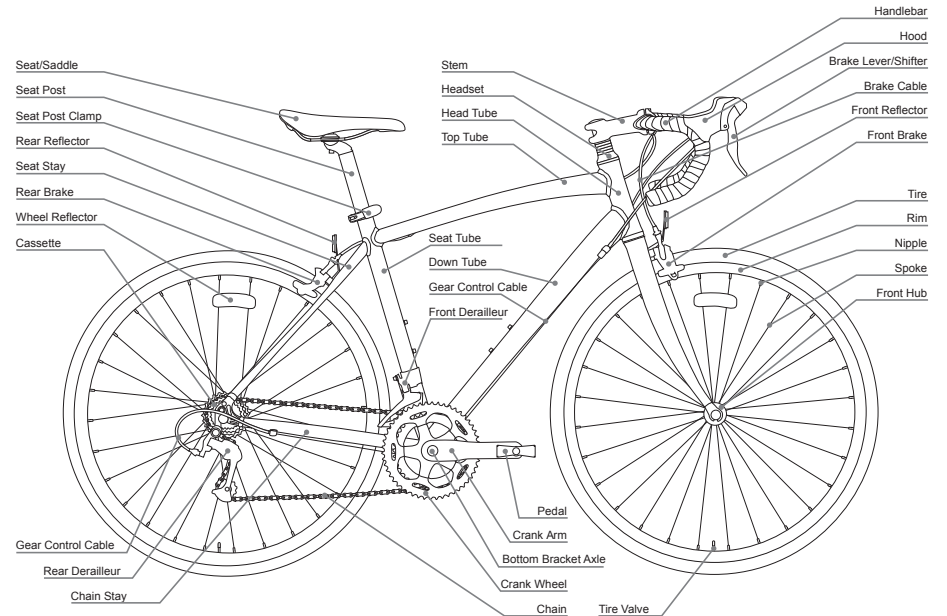
This style of bicycle is a popular general purpose type most suited for young riders. They are valued because of their sturdy, simple construction and low maintenance.



# PARTS IDENTIFICATION GRAPHICS

## ROAD BICYCLES:

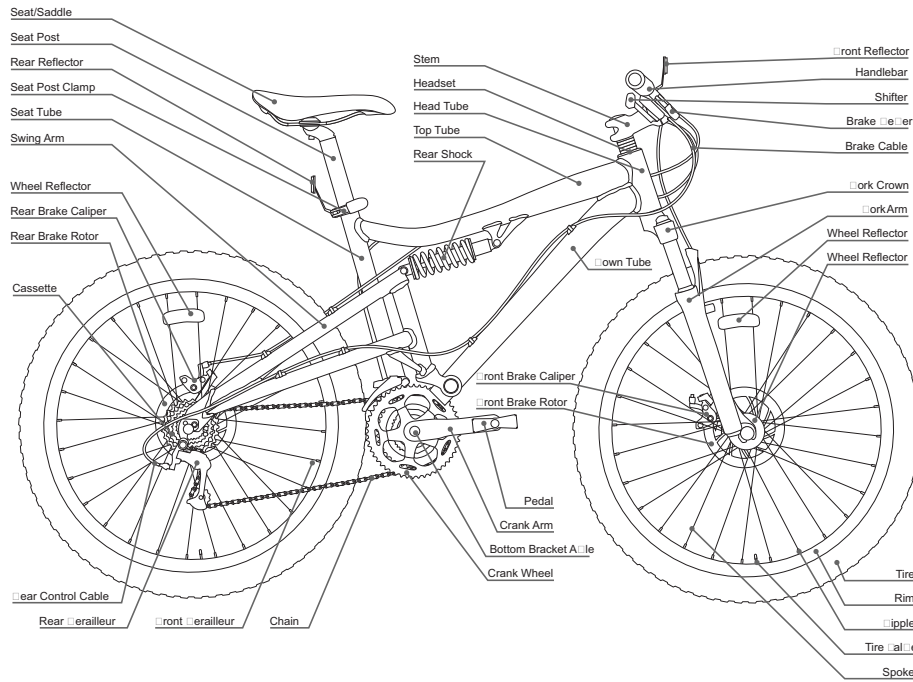
Road bicycles are designed to be ridden on roads or paved paths. The drop handlebars, convenient shift lever position and narrow tires make them very easy to control at speed.



# PARTS IDENTIFICATION GRAPHICS

## FULL SUSPENSION BICYCLES:

Full Suspension bicycles are designed to be ridden over fairly to moderately aggressive terrain. Their combined suspension and wider rims and tires allow them to easily roll over obstacles.



# BEFORE RIDING:

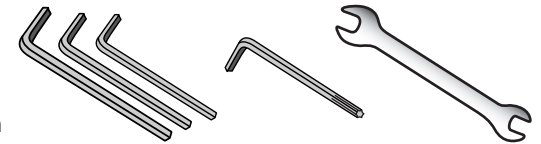
Your new bicycle was assembled and tuned in the factory and then partially disassembled for shipping. The following instructions will enable you to prepare your bicycle for years of enjoyable cycling. For more details on inspection, lubrication, maintenance and adjustment of any area please refer to the relevant sections in this manual. If you have questions about your ability to properly assemble this bicycle, please consult a qualified bicycle mechanic before riding.



TO AVOID INJURY, THIS PRODUCT MUST BE PROPERLY ASSEMBLED BEFORE USE. WE STRONGLY RECOMMEND THAT YOU REVIEW THE COMPLETE ASSEMBLY GUIDE AND PERFORM CHECKS SPECIFIED IN THE OWNER'S MANUAL BEFORE RIDING.

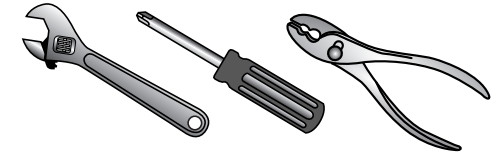
### Tools Included:

- 4mm, 5mm & 6mm hex wrenches
- 25 torx wrench
- 13mm and 15mm open end wrench

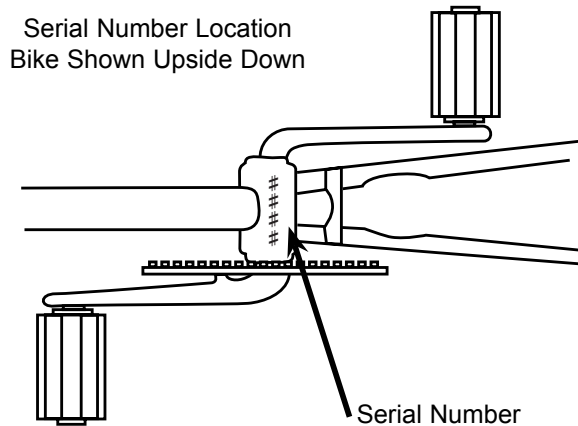


### Other Tools Required:

- Adjustable wrench
- Phillips head screwdriver
- A pair of pliers with cable cutting ability



Serial Number Location  
Bike Shown Upside Down



## ABOUT THIS GUIDE

It is important for you to understand your new bicycle. By reading this guide before you go out on your first ride, you'll know how to get better performance, comfort, and enjoyment from your new bicycle. It is also important that your first ride on your new bicycle is taken in a controlled environment, away from cars, obstacles, other cyclists and other distractions.

## A SPECIAL NOTE FOR PARENTS:

As a parent or guardian, you are responsible for the activities and safety of your minor child, and that includes making sure that the bicycle is properly fitted to the child; that it is in good repair and safe operating condition; that you and your child have learned and understand the safe operation of the bicycle; and that you and your child have learned, understand and obey not only the applicable local motor vehicle, bicycle and traffic laws, but also the common sense rules of safe and responsible bicycling. As a parent, you should read this guide, the owners manual, as well as review the warnings and the bicycle's functions and operating procedures with your child, before letting your child ride the bicycle.





**WARNING: MAKE SURE THAT YOUR CHILD ALWAYS WEARS AN APPROVED BICYCLE HELMET WHEN RIDING; BUT ALSO MAKE SURE THAT YOUR CHILD UNDERSTANDS THAT A BICYCLE HELMET IS FOR BICYCLING ONLY, AND MUST BE REMOVED WHEN NOT RIDING. A HELMET MUST NOT BE WORN WHILE PLAYING, IN PLAY AREAS, ON PLAYGROUND EQUIPMENT, WHILE CLIMBING TREES, OR AT ANY TIME WHILE NOT RIDING A BICYCLE. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH.**

## GENERAL WARNING

Like any sport, bicycling involves risk of injury and damage. By choosing to ride a bicycle, you assume the responsibility for that risk, so you need to know - and to practice - the rules of safe and responsible riding and of proper use and maintenance. Proper use and maintenance of your bicycle reduces the risk of injury. Like any sport, bicycling involves risk of injury and damage. By choosing to ride a bicycle, you assume the responsibility for that risk, so you need to know - and to practice - the rules of safe and responsible riding and of proper use and maintenance. Proper use and maintenance of your bicycle reduces risk of injury.

This guide contains many "Warnings" and "Cautions" concerning the consequences of failure to maintain or inspect your bicycle and of failure to follow safe cycling practices.

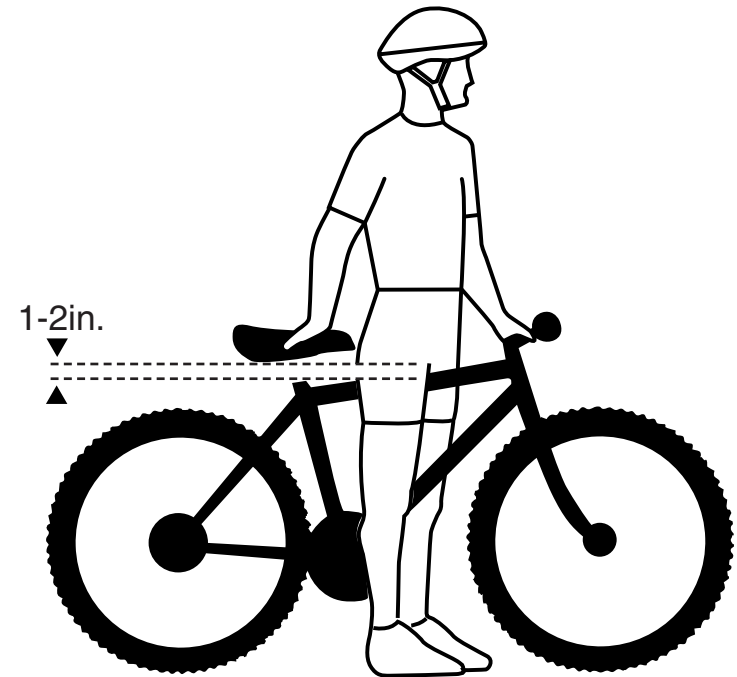
- The combination of the  safety alert symbol and the word WARNING indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.
- The combination of the  safety alert symbol and the word CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or is an alert against unsafe practices.
- The word CAUTION used without the safety alert symbol indicates a situation which, if not avoided, could result in serious damage to the bicycle or the voiding of your warranty.

Many of the Warnings and Cautions say "you may lose control and fall." Because any fall can result in serious injury or even death, we do not always repeat the warning of possible injury or death. Because it is impossible to anticipate every situation or condition which can occur while riding, this guide makes no representation about the safe use of the bicycle under all conditions. There are risks associated with the use of any bicycle which cannot be predicted or avoided, and which are the sole responsibility of the rider.

## CORRECT FRAME SIZE

When selecting a new bicycle, the correct choice of frame size is a very important safety consideration. Most full sized bicycles come in a range of frame sizes. These sizes usually refer to the distance between the center of the bottom bracket and the top of the frame seat tube.

The ideal clearance will vary between types of bicycles and rider preference. This makes straddling the frame when off the saddle easier and safer in situations such as sudden traffic stops. Women can use a men's style bicycle to determine the correct size women's model.



**FOR SAFE AND COMFORTABLE RIDING THERE SHOULD BE CLEARANCE OF NO LESS THAN 1 - 2 INCHES BETWEEN THE GROIN AREA OF THE INTENDED RIDER AND THE TOP TUBE OF THE BICYCLE FRAME, WHILE THE RIDER STRADDLES THE BICYCLE WITH BOTH FEET FLAT ON THE GROUND.**

# CHOOSING YOUR CORRECT FRAME SIZE

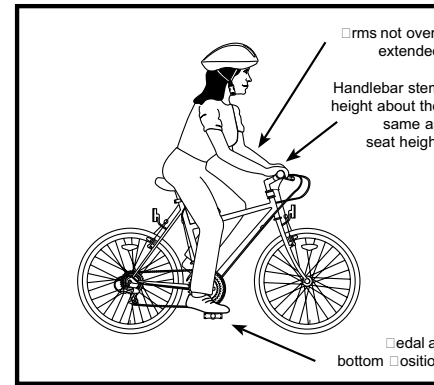
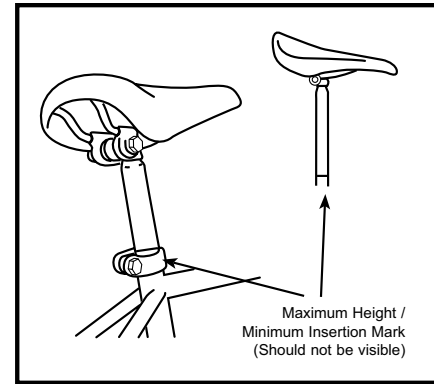
These are intended only as a guide:

MOUNTAIN BIKE/COMFORT BIKE/ PERFORMANCE HYBRID BIKE CHART*			
Rider Height (feet/inches)	Inseam Length (inches)	Bike Frame Size (inches)	Bike Frame Size (name)
4 ft. 11 in. - 5 ft. 3 in.	25 in. - 27 in.	13 - 15 in.	XS
5 ft. 3 in. - 5 ft. 7 in.	27 in. - 29 in.	15 - 17 in.	SM
5 ft. 7 in. - 5 ft. 11 in.	29 in. - 31 in.	17 - 19 in.	MD
5 ft. 11 in. - 6 ft. 2 in.	31 in. - 33 in.	19 - 21 in.	LG
6 ft. 2 in. - 6 ft. 4 in.	33 in. - 35 in.	21 - 23 in.	XL
6 ft. 4 in. +	35 in. +	23 in. +	XL**

\* APPLIES TO BOTH OUR MEN'S AND LADIES' BICYCLES \*\* NO LARGER SIZE AVAILABLE

ROAD BIKE SIZING CHART (COMPACT GEOMETRY)			
Rider Height (feet/inches)	Inseam Length (inches)	Bike Frame Size (centimeters)	Bike Frame Size (name)
4 ft. 10 in. - 5 ft. 1 in.	25 in. - 27 in.	42 cm	XS
5 ft. 1 in. - 5 ft. 5 in.	27.5 in. - 28 in.	46 cm	SM
5 ft. 5 in. - 5 ft. 9 in.	28.5 in. - 31 in.	50 cm	MD
5 ft. 9 in. - 6 ft. 1 in.	31.5 in. - 33 in.	55 cm	LG
6 ft. 1 in. - 6 ft. 3 in.	33.5 in. - 34 in.	59 cm	XL
6 ft. 3 in. +	34.5 in. +	59 cm	XL**

\*\* NO LARGER SIZE AVAILABLE



# RIDING POSITION

## Saddle Height

In order to obtain the most comfortable riding position and offer the best possible pedaling efficiency, the seat height should be set correctly in relation to the rider's leg length. The correct saddle height should not allow leg strain from over-extension, and the hips should not rock from side to side when pedaling. While sitting on the bicycle with one pedal at its lowest point, place the ball of your foot on that pedal. The correct saddle height will allow the knee to be slightly bent in this position.

UNDER NO CIRCUMSTANCES SHOULD THE SEAT POST PROJECT "MAXIMUM EXTENSION" MARK. IF YOUR SEAT POST PROJECTS FROM THE FRAME BEYOND THESE MARKINGS, THE SEAT POST OR FRAME MAY BREAK, WHICH COULD CAUSE YOU TO LOSE CONTROL AND FALL. PRIOR TO YOUR FIRST RIDE, BE SURE TO TIGHTEN THE SADDLE ADJUSTING MECHANISM PROPERLY. A LOOSE SADDLE CLAMP OR SEAT POST BINDER CAN CAUSE DAMAGE TO THE BICYCLE OR CAN CAUSE YOU TO LOSE CONTROL AND FALL. PERIODICALLY CHECK TO MAKE SURE THAT THE SADDLE ADJUSTING MECHANISM IS PROPERLY TIGHTENED.

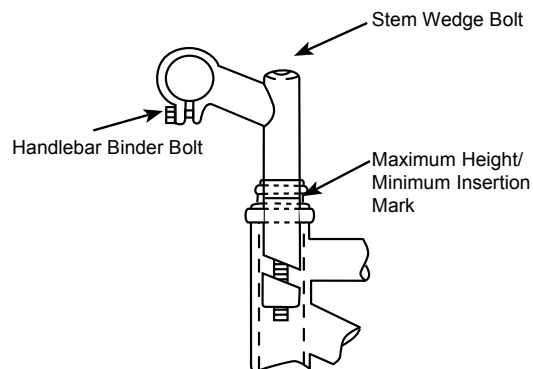
## REACH

To obtain maximum comfort, the rider should not overextend his or her reach when riding. There should be a slight bend in the rider's elbows.

Refer to the section regarding Seat and Seat Posts to learn how to adjust the seat clamp.

## HANDLEBAR HEIGHT

Maximum comfort is usually obtained when the handlebar height is equal to the height of the seat. You may wish to adjust the height to find the most comfortable position.



THREADLESS HEADSETS AND CLAMP-ON STEMS ARE NOT ADJUSTABLE. THE STEM'S "MINIMUM INSERTION" MARK MUST NOT BE VISIBLE ABOVE THE TOP OF THE HEADSET. IF THE STEM IS EXTENDED BEYOND THIS MARK, THE STEM MAY BREAK OR DAMAGE THE FORK'S STEERER TUBE, WHICH COULD CAUSE YOU TO LOSE CONTROL AND FALL. FAILURE TO PROPERLY TIGHTEN THE STEM BINDER BOLT, THE HANDLEBAR BINDER BOLT, OR THE BAR END EXTENSION CLAMPING BOLTS MAY COMPROMISE STEERING ACTION, WHICH COULD CAUSE YOU TO LOSE CONTROL AND FALL. PLACE THE FRONT WHEEL OF THE BICYCLE BETWEEN YOUR LEGS AND ATTEMPT TO TWIST THE HANDLEBAR/STEM ASSEMBLY USING A REASONABLE AMOUNT OF FORCE. IF YOU CAN TWIST THE STEM IN RELATION TO THE FRONT WHEEL, TURN THE HANDLEBARS IN RELATION TO THE STEM, OR TURN THE BAR END EXTENSIONS IN RELATION TO THE HANDLEBAR, YOU MUST TIGHTEN THE APPROPRIATE BOLTS ACCORDINGLY.

## SAFETY CHECKLIST

Before every ride, it is important to carry out the following safety checks:

1. Brakes
  - Ensure front and rear brakes work properly.
  - Ensure brake shoe pads are not over worn and are correctly positioned in relation to the rims.
  - Ensure brake control cables are lubricated, correctly adjusted and display no obvious wear.
  - Ensure brake control levers are lubricated and tightly secured to the handlebar.
2. Wheels and Tires
  - Ensure tires are inflated to within the recommended limit as displayed on the tire sidewall.
  - Ensure tires have tread and have no bulges or excessive wear.
  - Ensure rims run true and have no obvious wobbles or kinks.
  - Ensure all wheel spokes are tight and not broken.
  - Check that axle nuts are tight. If your bicycle is fitted with quick release axles, make sure locking levers are correctly tensioned and in the closed position.
3. Steering
  - Ensure handlebar and stem are correctly adjusted and tightened, and allow proper steering.
  - Ensure that the handlebars are set correctly in relation to the forks and the direction of travel.
  - Check that the headset locking mechanism is properly adjusted and tightened.
  - If the bicycle is fitted with handlebar end extensions, ensure they are properly positioned and tightened.
4. Chain
  - Ensure chain is oiled, clean and runs smoothly.
  - Extra care is required in wet or dusty conditions.
5. Bearings
  - Ensure all bearings are lubricated, run freely & display no excess movement, grinding or rattling.
  - Check headset, wheel bearings, pedal bearings and bottom bracket bearings.
6. Cranks and Pedals
  - Ensure pedals are securely tightened to the cranks.
  - Ensure cranks are securely tightened to the axle and are not bent.
7. Derailleurs
  - Check that front and rear mechanisms are adjusted and function properly.
  - Ensure control levers are securely attached.
  - Ensure derailleurs, shift levers and control cables are properly lubricated.
8. Frame and Fork
  - Check that the frame and fork are not bent or broken.
  - If either are bent or broken, they should be replaced.
9. Accessories
  - Ensure that all reflectors are properly fitted and not obscured.
  - Ensure all other fittings on the bike are properly and securely fastened, and functioning.
  - Ensure the rider is wearing a helmet.

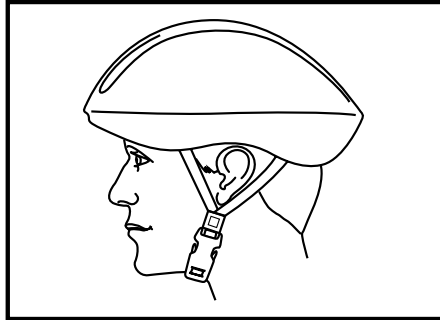


## HELMETS

It is strongly advised that a properly fitting, ANSI approved, bicycle safety helmet be worn at all times when riding your bicycle. In addition, if you are carrying a passenger in a child safety seat, they must also wear a helmet.

The correct helmet should:

- be comfortable
- be lightweight
- have good ventilation
- fit correctly
- cover forehead



ALWAYS WEAR A PROPERLY FITTED HELMET WHICH COVERS THE FOREHEAD WHEN RIDING A BICYCLE.

## REFLECTORS

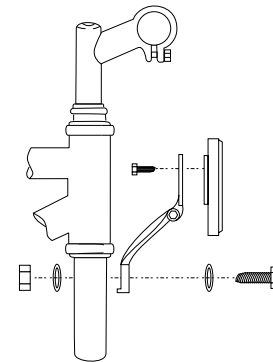
Your bicycle is supplied with one front (white), one rear (red), two wheel (white), and pedal (orange) reflectors. (Please Note: Sidewalk bikes, 12" and under, may not have reflectors.) These are an important safety and legal requirement, and should remain securely fitted and in good, clean condition at all times. Periodically, inspect all reflectors, brackets and mounting hardware for signs of wear or damage. Replace immediately if damage is found. Some bicycles will require you to install your reflectors onto your bicycle. Please refer to the following section for instructions on all the types of bicycle reflectors.



REFLECTORS ARE IMPORTANT SAFETY DEVICES WHICH ARE DESIGNED AS AN INTEGRAL PART OF YOUR BICYCLE. FEDERAL REGULATIONS REQUIRE EVERY BICYCLE TO BE EQUIPPED WITH FRONT, REAR, WHEEL, AND PEDAL REFLECTORS. THESE REFLECTORS ARE DESIGNED TO PICK UP AND REFLECT STREET LIGHTS AND CAR LIGHTS IN A WAY THAT HELPS YOU TO BE SEEN AND RECOGNIZED AS A MOVING BICYCLIST. CHECK REFLECTORS AND THEIR MOUNTING BRACKETS REGULARLY TO MAKE SURE THEY ARE CLEAN, STRAIGHT, UNBROKEN AND SECURELY MOUNTED. HAVE YOUR DEALER REPLACE DAMAGED REFLECTORS AND STRAIGHTEN OR TIGHTEN ANY THAT ARE BENT OR LOOSE.

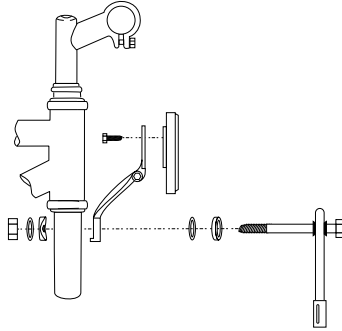
## FORK MOUNT REFLECTOR BRACKET ASSEMBLY

First insert one washer onto the hex bolt and insert hex bolt through the reflector bracket and then through the fork. Next, insert a second washer onto the bolt and thread a hex nut onto the bolt behind the fork. Tighten bolts until snug, making sure the reflector is in an upright position. See diagram below.



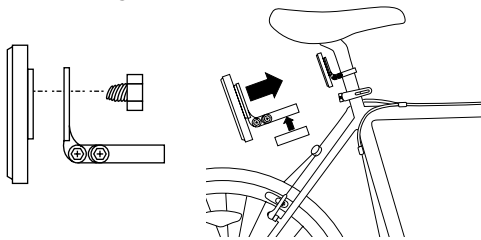
## FRONT REFLECTOR MOUNT WITH CALIPER BRAKE ASSEMBLY

First remove the hex nut from the back of the fork and pull the brake from the fork. Insert a spacer, washer and the reflector bracket on to the caliper bolt. Insert the caliper bolt back into the fork and secure firmly with a concave spacer, washer and the hex nut. Finally, adjust the reflector such that it is in an upright position. See diagram below.



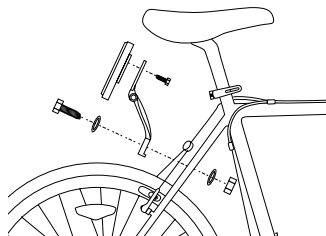
## SEAT AND HANDLEBAR MOUNTING REFLECTORS

First attach the reflector to the reflector bracket with the reflector screw, see the top diagram. Next, remove the clamp screw and open the clamping reflector bracket. Place clamping reflector bracket around the handlebar or seatpost. If the clamp is too loose, insert the shim inside of the clamp. Tighten the clamp screw to hold reflector assembly in place, see the second diagram. Finally, adjust the reflector assembly in place and ensure that it is upright and facing away from the bike. See diagram below.



## SEATSTAY MOUNT REFLECTOR BRACKET ASSEMBLY

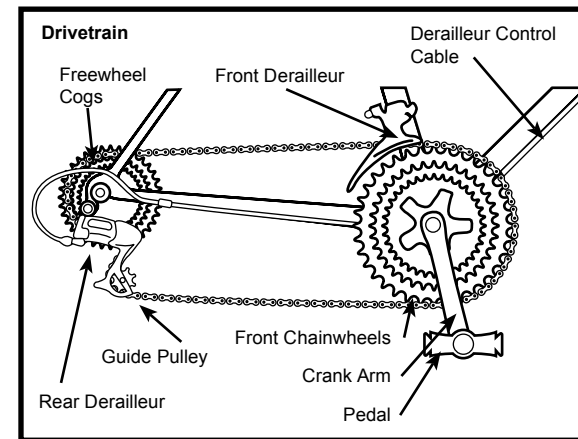
First insert one washer onto the hex bolt and insert hex bolt through the reflector bracket and then through the seatstay bridge. Next, insert a second washer onto the bolt and thread a hex nut onto the bolt behind the seatstay bridge. Tighten bolts until snug, making sure the reflector is in an upright position. See diagram below.



## GEARS - HOW TO OPERATE

### Derailleur Gears

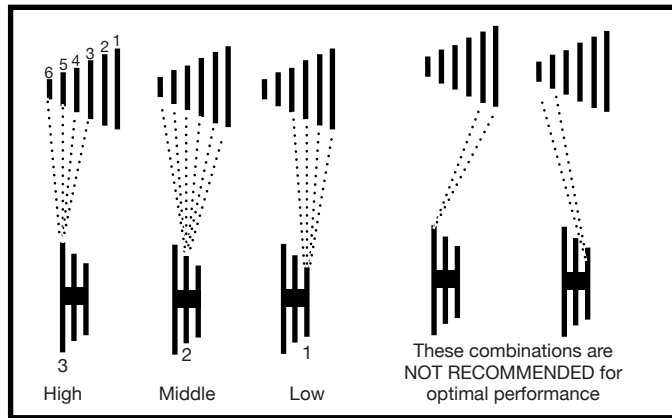
Most multi-speed bicycles today are equipped with what are known as derailleur gears. They operate using a system of levers and mechanisms to move the drive chain between different sized driving gears or cogs. The purpose of gears is to let you maintain a constant, steady pedaling pace under varying conditions. Bicycles come with a variety of gear configurations from 5 to 30 speeds.



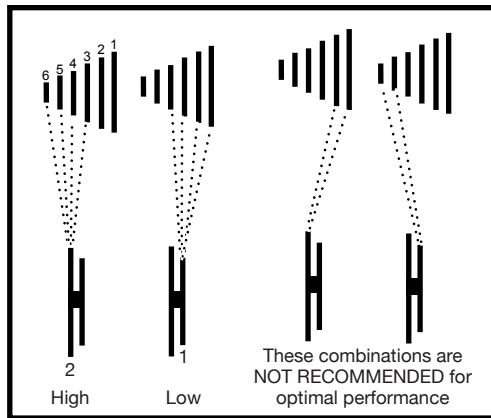
## Operating Principles

The front derailleur is operated by the left shift lever and the rear derailleur by the right. To operate you must be pedaling forward. You can not shift derailleur gears when you are stopped or when pedaling backwards. Before shifting ease up on your pedaling pressure. For a smooth gear change when approaching a hill, shift to a lower gear BEFORE your pedaling speed slows down too much. When coming to a stop, shift to a lower gear first so it will be easier when you start riding again. If, after selecting a new gear position, you hear a slight rubbing noise from the front or rear gears, gently adjust the appropriate shifter using the barrel adjusters until the noise goes away. For optimal performance and extended chain life, it is recommended that you avoid using the extreme combinations of gear positions (diagram next page) for extended periods.

Recommended Chainwheel/Rear Sprocket Gear Combinations



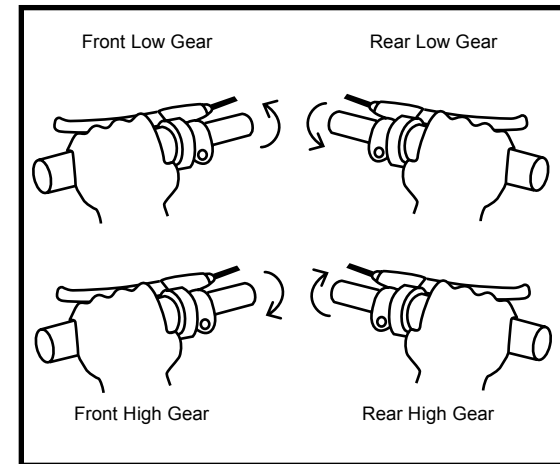
Triple Chainwheel



Double Chainwheel

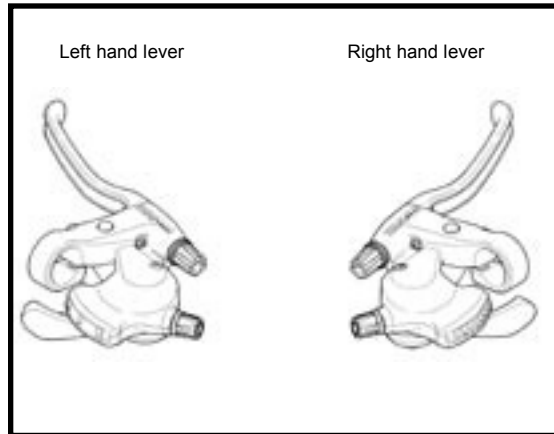
## HAND GRIP SHIFTERS

Some bicycles will have a shifting mechanism which is built into the handlebar grips and does not make use of separate levers. To select a lower gear, twist the right shifter toward you to engage a larger rear cog. You can shift one gear at a time or through multiple gears by continued twisting. By twisting the left shifter forward or away from you, a smaller chainwheel can be selected. To select a higher gear, twist the right shifter forward or away from you to engage a smaller rear cog. To engage a larger front chainwheel, twist the left shifter towards you. Single shifts can be achieved by twisting one click at a time and multiple shifts by larger twists.



## LEVERED SHIFTERS

Many mountain style bicycles now use a shift lever arrangement mounted on the underside of the handlebars, which use two levers operated by the thumb and index finger. To select a lower gear push the larger (lower) right shifter with your thumb to engage a larger rear cog. One firm push shifts the chain one cog, continuing to push will move the chain over multiple cogs. Pulling the smaller (upper) left shifter with your index finger moves the chain from a larger to a smaller chainwheel. To select a higher gear pull the smaller (upper) right lever with your index finger to engage a smaller rear cog. Pushing the larger (lower) left lever with your thumb will move the chain from a smaller to a larger chainwheel.



## ASSEMBLY INSTRUCTIONS



WE RECOMMEND THAT YOU CONSULT A PROFESSIONAL BICYCLE MECHANIC IF YOU HAVE DOUBTS OR CONCERNS AS TO YOUR EXPERIENCE OR ABILITY TO PROPERLY ASSEMBLY, REPAIR, OR MAINTAIN YOUR BICYCLE.

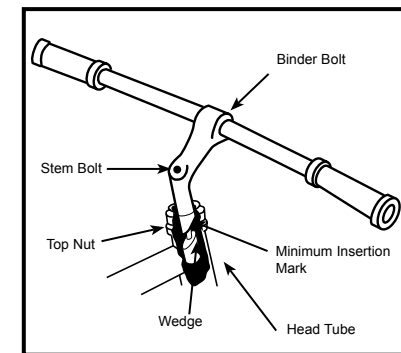
## DERAILLEUR GEARED BICYCLES

### GETTING STARTED

Open the carton from the top and remove the bicycle. Remove the straps and protective wrapping from the bicycle. Inspect the bicycle and all accessories and parts for possible shortages. It is recommended that the threads and all moving parts in the parts package be lubricated prior to installation. Do not discard packing materials until assembly is complete to insure that no required parts are accidentally discarded. Assemble your bicycle following the steps that pertain to your model.

### HANDLEBARS

Remove the protective cap from the handlebar stem wedge and loosen the hex key bolt using the 6mm hex key. Some models may use a 13mm hexagonal bolt instead of an hex key bolt. Place the handlebar stem into the fork steerer tube, ensuring that all cables are free of tangles. Tighten the stem bolt observing the minimum insertion mark and checking that the forks and the handlebars are facing forward. Check the headset for smooth rotation and that the top nut is secured tightly. Loosen the 6mm Binder Bolt and rotate the handlebar forward so the levers are at a 45 degree angle below the handlebar. Retighten the Binder Bolt to ensure the handlebar does not rotate in the stem.



WARNING: OVER TIGHTENING THE STEM BOLT OR HEADSET ASSEMBLY MAY CAUSE DAMAGE TO THE BICYCLE AND/OR INJURY TO THE RIDER.

## ADJUSTABLE STEMS

Some bicycles may be equipped with a stem that has an adjustable angle. In addition to the normal assembly, these stems will require angling the stem to the desired position, and securely tightening the 6mm angle bolt located in front of the stem bolt. Failure to do this may cause loss of steering control.

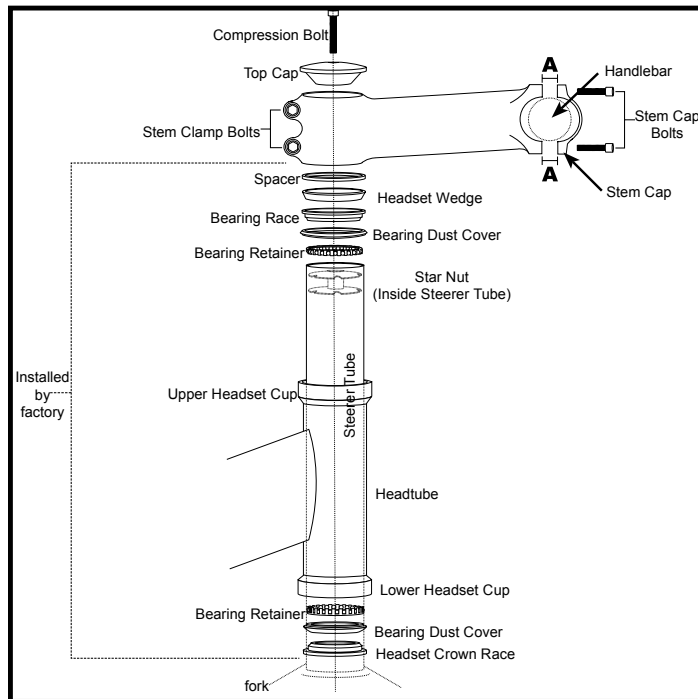
## TIGHTENING/PRELOADING THREADLESS HEADSETS

Stem Installation (Should be assembled on the bike already)

1. Insert the compression bolt through the top cap and the stem. Begin threading into the star nut.
2. Tighten compression bolt so it removes all play from the fork, but allows the fork to rotate smoothly.
3. Align the stem with the front wheel. Tighten the stem clamp bolts to secure the stem to the steerer tube.

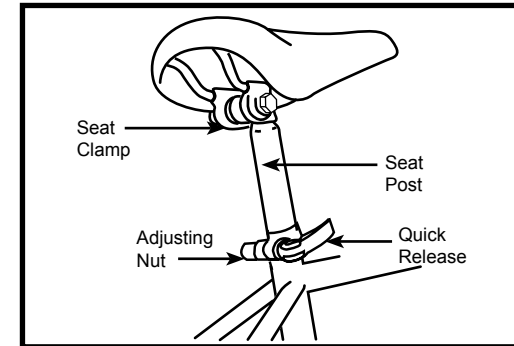
## HANDLEBAR INSTALLATION

1. Remove the stem cap bolts and stem cap.
2. Insert handlebar into the stem cap.
3. Tighten the stem cap bolts equally. Note the distance between the stem and stem cap: It should be equal on the top and bottom of the stem cap. "A" must be equal distance.



## SEAT AND SEAT POST

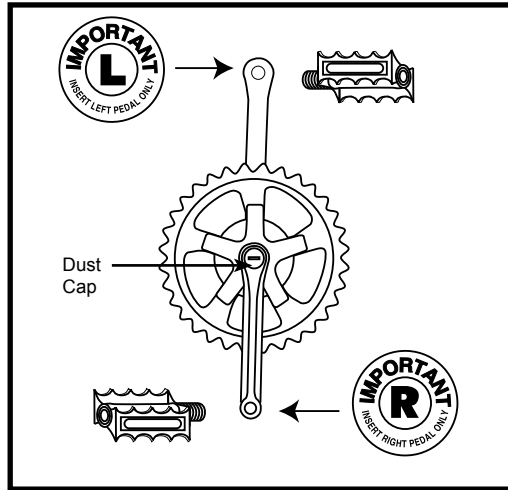
Attach the seat to the seat post if required by loosening the nuts on the seat clamp. Insert the tapered end of the seat post into the seat clamp until it is at the top of the clamp. Partially tighten the nuts on the seat clamp until the seat is snug, but can still be turned. Insert the seat assembly into the frame of the bicycle and adjust the seat to the proper height. The seat post must be inserted to at least the "Minimum Insertion" line marked on the seat post. If equipped with a quick release skewer; tighten the adjusting nut by hand and move the quick release lever to the closed position. You should feel considerable resistance while moving the lever. If not, re-open and re-tighten the lever, then move it to the closed position so it is in line with the frame as pictured. If equipped with a binder clamp; insure the lip on the binder clamp is fitted completely against the top of the seat tube of the frame. With the seat post inserted, tighten the binder bolt securely. Position the top of the seat parallel with the ground. Push the front of the seat up and down to firmly mesh the serrations together. The serrations must mesh completely together to insure a stabilized riding position. Securely tighten the nut on the seat clamp. If there is a nut on both sides of the clamp, tighten each one by alternating from one to the other. Check for tightness by twisting the seat from side to side, and from front to back. If the seat moves at the seat clamp or quick release, reposition and re-tighten the appropriate clamping mechanism.



THE SEAT POST MUST BE INSERTED SO THAT THE MINIMUM INSERTION MARK CANNOT BE SEEN. THE QUICK RELEASE MECHANISM MUST BE TIGHTENED SECURELY TO PREVENT A SUDDEN SHIFT OF THE SEAT WHEN RIDING. FAILURE TO DO THIS MAY CAUSE LOSS OF BICYCLE CONTROL.

## PEDALS

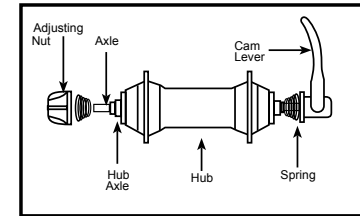
Look for the letters “R” for right, and “L” for left, stamped on each pedal spindle. Start each pedal spindle by hand to avoid stripping the threads. Tighten with a 15mm narrow open ended wrench. Note that the right hand pedal attaches to the chainwheel side crank arm with a right-hand (clockwise) thread. The left pedal attaches to the other crank arm and has a left-hand (counter-clockwise) thread. It is very important that you check the crank set for correct adjustment and tightness before riding your bicycle.



ATTACHMENT OF AN INCORRECT PEDAL INTO A CRANK ARM CAN STRIP PEDAL THREADS AND CAUSE IRREPARABLE DAMAGE. BEFORE YOUR FIRST RIDE, PLEASE CHECK TO INSURE YOUR PEDALS ARE ATTACHED CORRECTLY.

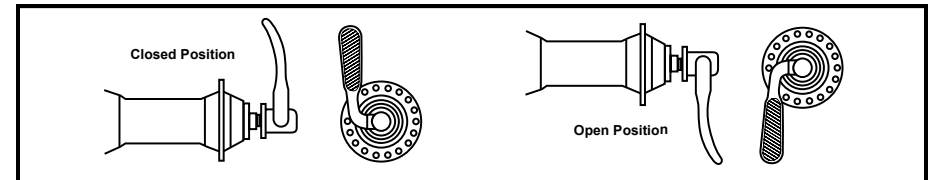
## FRONT WHEEL

Insert the front wheel into the fork dropouts. Tighten the wheel nuts using the appropriate 14mm or 15mm wrench. Spin the wheel checking for trueness. Some bicycles have wheel axles that incorporate a cam lever. This allows easy wheel removal without the need for tools. The cam lever uses a long bolt with an adjusting nut on one end, and a lever operating a cam-action tensioner on the other. If the wheel is fitted with this type of axle, turn the adjusting nut so that the locking lever is moved to the closed position with a firm action. At the halfway closed position of the quick release lever, you should start to feel some resistance to this motion. Do not tighten the cam lever by using it like a wing nut. If the cam lever is moved to the closed position with no resistance, clamping strength is insufficient. Move the cam lever to the open position, tighten the adjusting nut, and return the cam lever to the closed position.



## CORRECT CAM LEVER AXLE SETTING

1. To set, turn the lever to the open position so that the curved part faces away from the bicycle.
2. While holding the lever in one hand, tighten the adjusting nut until it stops.
3. Pivot the lever towards the closed position. When the lever is halfway closed, there must be firm resistance to turn it beyond that point. If resistance is not firm, open the lever and tighten the adjusting nut in a clockwise direction.
4. Continue to pivot the lever all the way to the closed position so that the curved part of the lever faces the bicycle.
5. The wheel is tightly secured when the serrated surfaces of the clamping parts actually begin to cut into the bicycle frame/fork surfaces.
6. Note that the same procedure applies when operating a quick release seat post binder mechanism.

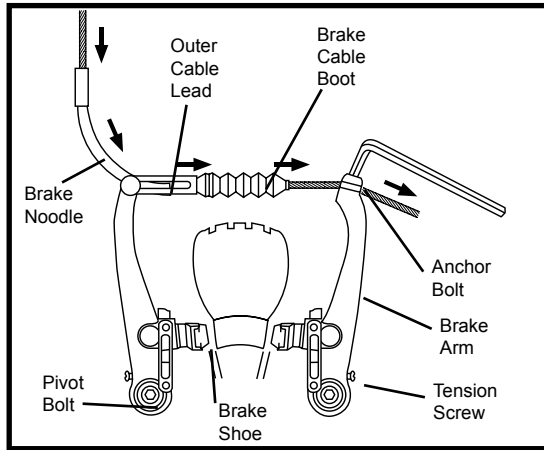


IF YOU CAN FULLY CLOSE THE CAM LEVER WITHOUT WRAPPING YOUR FINGERS AROUND THE FORK BLADE FOR LEVERAGE, AND THE LEVER DOES NOT LEAVE A CLEAR IMPRINT IN THE PALM OF YOUR HAND, THE TENSION IS INSUFFICIENT. OPEN THE LEVER, TURN THE ADJUSTING NUT, AND TRY AGAIN. CONTINUE UNTIL THE CAM LEVER CLOSES PROPERLY. SECONDARY RETENTION DEVICES ARE NOT A SUBSTITUTE FOR A CORRECT CAM LEVER ADJUSTMENT. FAILURE TO PROPERLY ADJUST THE CAM LEVER MECHANISM CAN CAUSE THE WHEEL TO WOBBLE OR DISENGAGE, WHICH COULD CAUSE YOU TO LOSE CONTROL AND FALL, RESULTING IN SERIOUS INJURY OR DEATH.

# BRAKES

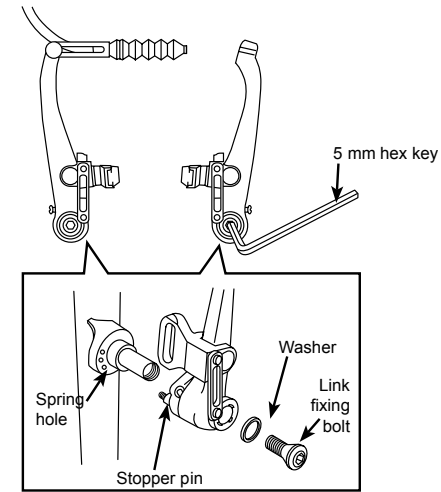
## V-Style Brakes

If not already assembled, take the brake noodle from the parts box and slide the cable through the larger opening. The cable housing will then seat into the end of the noodle. Slide the cable through the cable lead on the end of the left brake arm, this will cause the noodle to fit into the lead. Slip the brake cable boot over the cable and position it between both brake arms. Next, loosen the 5mm anchor bolt at the end of the right brake arm and slide the cable under the retaining washer. Pull the slack out of the cable making sure a distance of 39mm or more remains between the end of the lead and the start of the anchor bolt. Once the cable is secured to the brake arms, engage the brake lever several times, checking the position of the brake shoes at the rim. The brake shoes should be 1mm away from the rim when in a relaxed position. When the brake lever is engaged, the brake shoe should hit the rim flush (never the tire) with the front brake pad touching the rim slightly before the rear. This is called “toeing-in” your brake shoe. If this position is not achieved, adjustments to the brake shoe are required. Loosen the brake shoe hardware and reposition the brake shoe. It may take several shoe and cable adjustments before the required position is accomplished.

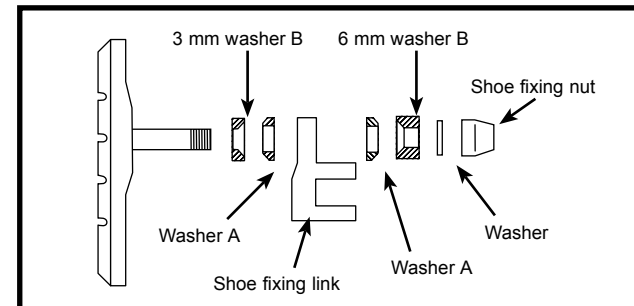
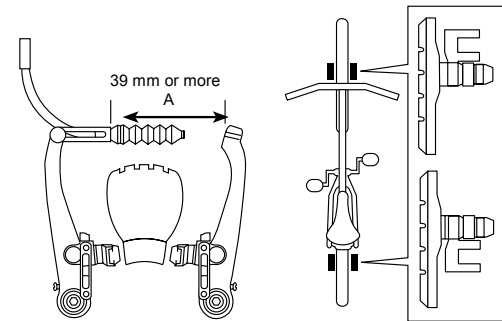


## V-Style Brake

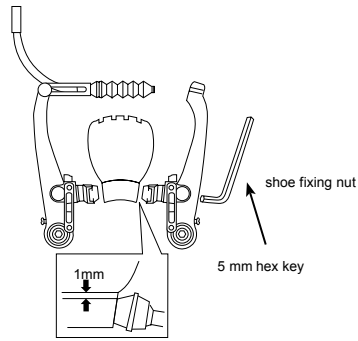
1. If fitted with V-Style Brakes, insert the brake body into the center spring hole in the frame mounting boss, and then secure the brake body to the frame with the link fixing bolt.



2. While holding the shoe against the rim, adjust the amount of shoe protrusion by interchanging the position of the B washers (i.e. 6 mm and 3 mm) so that dimension A is kept at 39 mm or more.



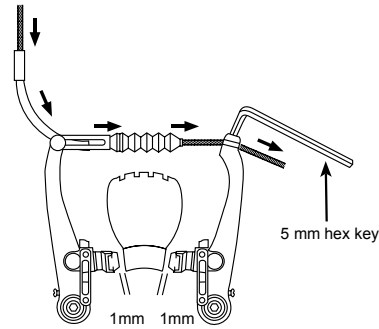
3. While holding the shoe against the rim, tighten the shoe fixing nut.



DO NOT RIDE THE BICYCLE UNTIL THE BRAKES ARE FUNCTIONING PROPERLY. TO TEST, APPLY THE BRAKES WHILE TRYING TO PUSH THE BIKE FORWARD TO MAKE SURE THEY WILL STOP THE BICYCLE. NEVER RIDE A BICYCLE THAT IS NOT FUNCTIONING PROPERLY.

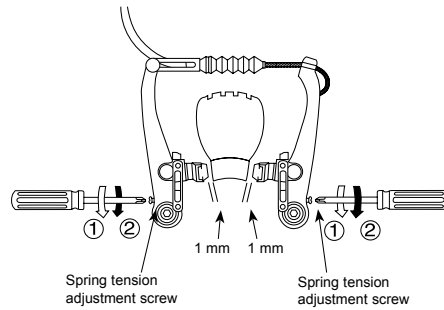
PRESS EACH BRAKE LEVER TO MAKE SURE THAT THERE IS NO BINDING AND THAT THE BRAKE PADS PRESS HARD ENOUGH ON THE RIMS TO STOP THE BIKE. THE BRAKE PADS SHOULD BE ADJUSTED SO THEY ARE 1 MM TO 2 MM AWAY FROM THE RIM WHEN THE BRAKES ARE NOT APPLIED. BRAKE PADS SHOULD BE CENTERED ON THE RIM AND "TOED-IN" SO THE REAR PORTION OF EACH BRAKE PAD IS ABOUT 0.5 - 1.0 MM FARTHER FROM THE RIM THAN THE FRONT PORTION OF THE BRAKE PAD.

4. Pass the inner cable through the inner cable lead. Set the cable with a clearance of 1mm between each brake pad and the rim, tighten the cable fixing bolt.

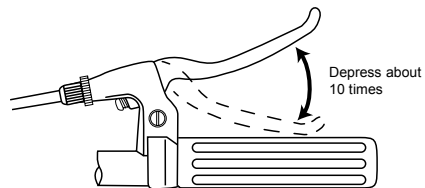


DO NOT LOCK UP BRAKES. SUDDEN OR EXCESSIVE APPLICATION OF THE FRONT BRAKE MAY PITCH THE RIDER OVER THE HANDLEBARS, CAUSING SERIOUS INJURY OR DEATH. WHEN BRAKING, ALWAYS APPLY THE REAR BRAKE FIRST, THEN THE FRONT.

5. Adjust the balance with the spring tension adjustment screws.



6. Depress the brake lever about 10 times as far as the grip to check that everything is operating correctly and that the shoe clearance is correct before using the brakes.





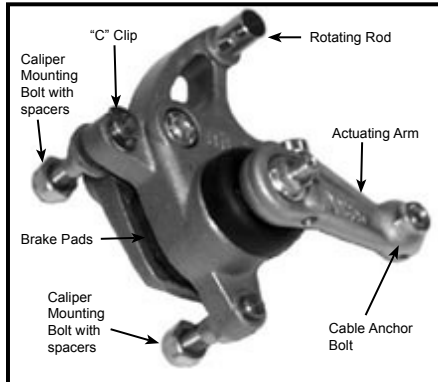
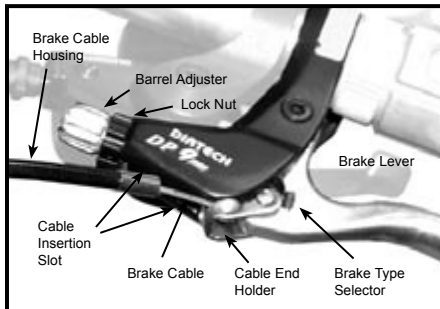
## DISC BRAKES

If fitted with a front disc brake, the components should already be attached. However, please check all connections before attempting to ride the bicycle. Secure tightly the 6 bolts that hold the disc to the front wheel hub and the 2 bolts that hold the brake mechanism to the bicycle. Insert the front wheel into the fork dropouts ensuring that the disc fits into the brake mechanism between the enclosed brake pads. Secure the front wheel to the bicycle by tightening the cam lever mechanism and clamping the lever to the closed position.

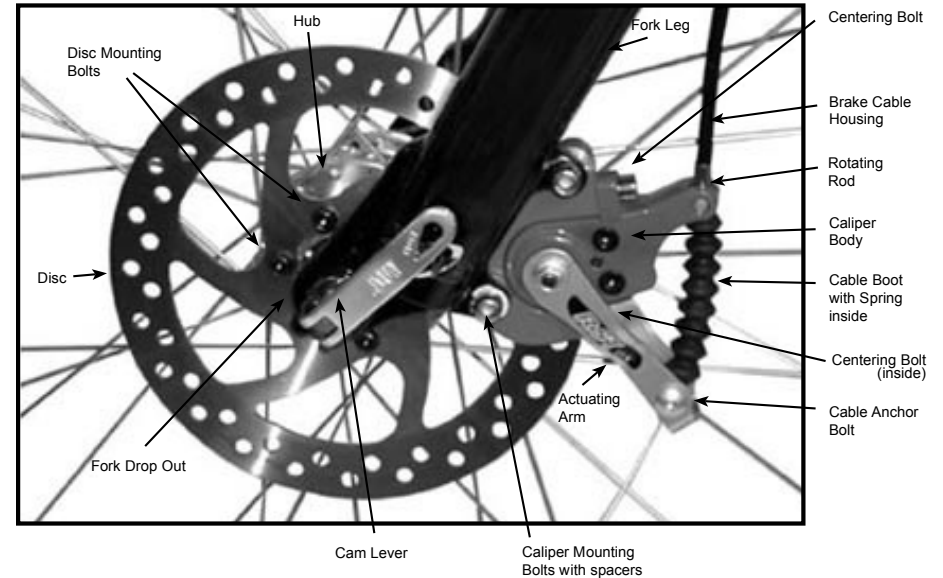
Next, attach the cable to the brake lever by inserting the cable end into the cable end holder after the barrel adjuster and lock nut slots have been aligned with the cable end holder. After the cable is secured to the lever, rotate the barrel adjuster and lock nut so the slots no longer line up. Ensure the cable housing seats appropriately into the end of the barrel adjuster and check for any kinks or damage.

Slide the exposed brake cable through the rotating rod located on the caliper body and seat the housing into the same stop. Insert the cable into the spring and spring boot.

Next, slide the cable through the cable anchor and pull all the slack out. Secure the cable in place by tightening the bolts of the anchor assembly. Some disc brakes will have a centering device while others are a free-floating mechanism. If your caliper body is equipped with centering bolts, apply the brake lever after the cable has been connected. While engaging the lever, tighten the centering bolts securely. This will center the caliper body on the disc.



## DISC BRAKES



**DISC BRAKES REQUIRE A BREAK IN PERIOD! RIDE AND USE THE BRAKES GENTLY FOR 15 MILES BEFORE USING THE BRAKES IN DOWNHILL CONDITIONS, FOR SUDDEN STOPS, OR ANY OTHER SERIOUS BRAKING. PLEASE BE AWARE THAT YOUR BRAKE SYSTEM WILL CHANGE IN PERFORMANCE THROUGHOUT THE WEAR-IN PROCESS. THE DISC BRAKE SHOULD BE CLEANED BEFORE THE FIRST RIDE USING RUBBING ALCOHOL. NEVER USE OIL OR SIMILAR PRODUCTS TO CLEAN YOUR DISC BRAKE SYSTEM.**



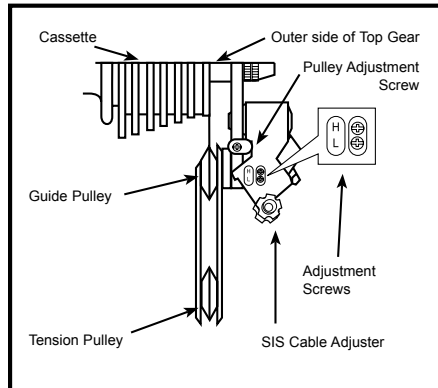
**BRAKE DISC GETS HOT! SEVERE INJURY COULD RESULT FROM CONTACT WITH THE HOT DISC! MIND YOUR LEGS, AS WELL AS YOUR HANDS.**

## DERAILLEUR

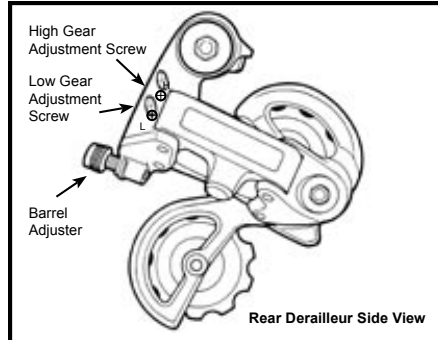
Although the front and rear derailleurs are initially adjusted at the factory, you will need to inspect and readjust both before riding the bicycle.

### Rear Derailleur

Begin by shifting the rear shifter to largest number indicated, disconnect the cable from the rear derailleur cable anchor bolt, and place the chain on the smallest sprocket.



Adjust the High limit screw so the guide pulley and the smallest sprocket are lined up vertically. Reconnect the cable, pull out any slack, and retighten the anchor bolt securely. Shift through the gears, making sure each gear achieved is done quietly and without hesitation. If necessary, use the barrel adjuster to fine tune each gear by turning it the direction you want the chain to go. For example, turning clockwise will loosen the cable tension and move the chain away from the wheel, while turning counter-clockwise will tighten cable tension and direct the chain towards the wheel. Shift the rear shifter to the gear one and place the chain on the largest cog. Adjust the Low limit screw in quarter turn increments until the guide pulley and the largest cog are aligned vertically. Again, shift through each gear several times, checking that each gear is achieved smoothly. It may take several attempts before the rear derailleur and cable is adjusted properly.

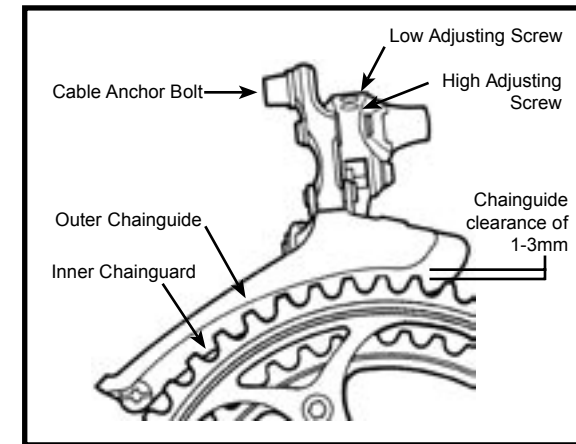


### Front Derailleur

Shift both shifters to the smallest number indicated and place the chain on the corresponding cog and chainwheel. Disconnect the front derailleur cable from the cable anchor bolt. Check the position of the front derailleur; it should be parallel with the outer chainwheel and clear the largest chainwheel by 1-3mm when fully engaged.

With the chain on the smallest chainwheel in front and the largest cog in back, adjust the Low limit screw so the chain is centered in the front derailleur cage. Reconnect the cable, pull any slack out, and tighten the anchor bolt securely. Shift the front shifter to the largest chainwheel. If the chain does not go onto the largest chainwheel, turn the high limit screw in 1/4 turn increments counter-clockwise until the chain engages the largest chainwheel. If the chain falls off the largest chainwheel, and into the pedals, you will need to turn the High limit screw in 1/4 turn increments clockwise until the chain no longer falls off.

Shift through every gear, using the barrel adjusters to fine tune each transition. The barrel adjuster for the front derailleur is located on the front shifter where the cable comes out of the shifter. Clockwise will loosen the cable tension and direct the chain closer to the frame while counter-clockwise will tighten the cable tension and direct the chain away from the frame.



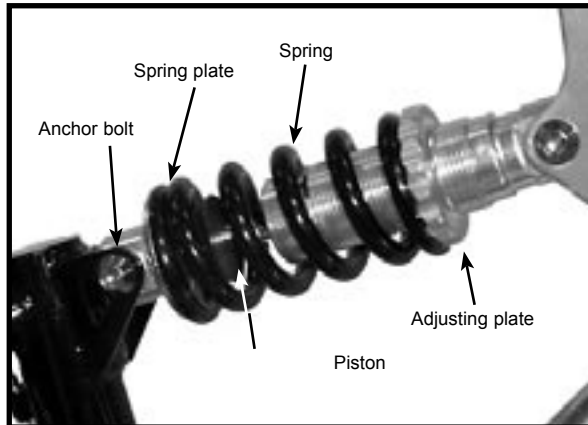
ENSURE ALL BOLTS ARE SECURED TIGHTLY AND THE CHAIN DOES NOT FALL OFF IN EITHER DIRECTION.



DO NOT RIDE A BICYCLE THAT IS NOT SHIFTING PROPERLY. OVERLOOKING PROPER ADJUSTMENTS MAY CAUSE IRREPARABLE DAMAGE TO THE BICYCLE AND/OR BODILY INJURY. NEVER MOVE THE SHIFTER WHILE PEDALING BACKWARD, NOR PEDAL BACKWARDS AFTER HAVING MOVED THE SHIFTER. THIS COULD JAM THE CHAIN AND CAUSE SERIOUS DAMAGE TO THE BICYCLE AND/OR RIDER.

## FULL SUSPENSION

Full Suspension bikes are equipped with a front fork as well as a rear suspension generally located below the seat. The piston works in conjunction with a spring to allow the bike to rotate on a pivot point. Ensure all attaching hardware is secured and there is no lateral movement of the rear triangle. On some bicycles the amount of rear suspension travel may be adjustable by turning the adjusting plate. Clockwise will increase spring tension and decrease travel, while turning counter-clockwise will decrease spring tension and increase travel.



THERE MUST BE ENOUGH TENSION ON THE SPRING TO HOLD THE SPRING PLATE IN PLACE. FAILURE TO DO THIS MAY CAUSE THE MECHANISM TO FAIL. FAILURE TO MAINTAIN, CHECK AND PROPERLY ADJUST THE SUSPENSION SYSTEM MAY RESULT IN SUSPENSION MALFUNCTION, WHICH CAN CAUSE YOU TO LOSE CONTROL AND FALL. CHANGING SUSPENSION ADJUSTMENT CAN CHANGE THE HANDLING AND BRAKING CHARACTERISTICS OF YOUR BICYCLE. NEVER CHANGE SUSPENSION ADJUSTMENT UNLESS YOU ARE THOROUGHLY FAMILIAR WITH THE SUSPENSION SYSTEM, MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS, AND ALWAYS CHECK FOR CHANGES IN THE PERFORMANCE OF YOUR BICYCLE BY TAKING A CAREFUL TEST RIDE IN A HAZARD FREE AREA. IF YOUR BIKE HAS SUSPENSION EQUIPMENT, THE INCREASED SPEED YOU MAY DEVELOP ALSO INCREASES YOUR RISK. WHEN BRAKING, THE FRONT OF A SUSPENDED BIKE DIPS. YOU COULD LOSE CONTROL OF THE BICYCLE AND FALL. GET TO KNOW HOW TO HANDLE YOUR SUSPENSION SYSTEM SAFELY BEFORE TRYING ANY DOWNHILL OR VERY FAST BIKING.

## ACCESSORIES

If your bike is supplied with a water bottle and cage, attach the cage to the bicycle using the hex bolts provided.

Some 20" and 24" model bicycles come with a rear derailleur guard to protect the rear derailleur from damage. To install, remove the rear wheel axle nut on the drive side, install the rear derailleur guard over the axle with the U-shaped guard pointing down, and retighten the axle nut. The guard will sit between the frame and the axle nut.



TIGHTEN BOTH REAR WHEEL AXLE NUTS OR THE CAM LEVER MECHANISM SECURELY. FAILURE TO DO THIS MAY CAUSE THE REAR WHEEL TO DISLodge FROM THE FRAME DROPOUTS RESULTING IN SERIOUS DAMAGE OR INJURY.

# FENDERS

## Front Fender

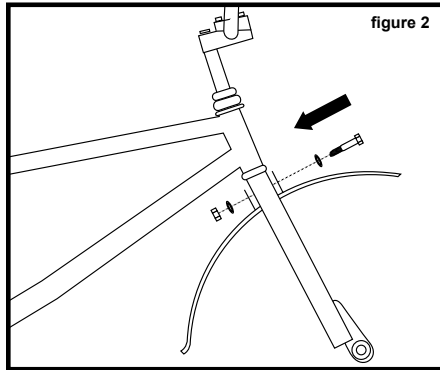
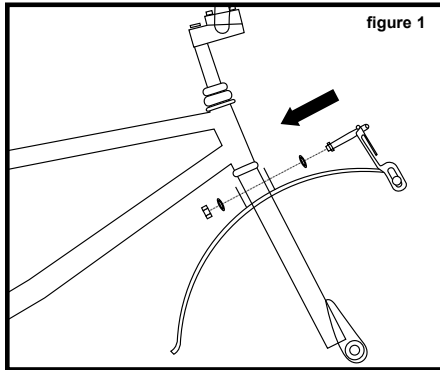
The front fender is mounted at the fork crown. There are two ways in which to mount your front fender. The first is the caliper brake mounting system (see figure 1), and the second is the 10mm nut and bolt system (see figure 2). Identify the mounting system used on your bicycle and follow the given instructions for that particular type of mounting system.

### 1. Caliper Brake Mounting System

First remove the front wheel from your bicycle. Remove the hex nut from the caliper brake bolt on the rear of the fork, and slide the brake assembly from the fork. Place the fender assembly onto the fork making sure the attachment holes and fender bracket holes line up. Reattach the caliper brake making sure that the brake arms are on each side of the fender. Tighten the bolt until secure.

### 2. 10mm Nut and Bolt Mounting System

First remove the front wheel from your bicycle. Place the fender assembly onto the fork making sure the attachment holes and fender bracket holes line up. Attach the fender with the 10mm hex bolt and nut. Tighten the bolt until secure.



# FENDERS

## Rear Fender

The rear fender is mounted at the seatstay brace. There are two ways in which to mount your rear fender. The first is the screw mounting system (see figure 3), and the second is the 10mm bolt and screw system (see figure 4). Identify the mounting system used on your bicycle and follow the given instructions for that particular type of mounting system.

### 1. Screw Mounting System

First remove the rear wheel. Place the fender assembly between the stays, making sure the fender bracket holes line up with those in the frame. Attach the fender by using two screws to directly mount the fender onto the frame. The mounts are located below the seat post and near the rear of the crank. Tighten all screws until snug.

### 2. 10mm Bolt and Screw System

First remove the rear wheel. Place the fender assembly between the stays, making sure the fender bracket holes line up with those in the frame. Attach the fender by using one screw to directly mount the fender onto the frame near the crank. Next, use the 10mm hex bolt and nut to attach the fender to the brace between the seat stays, near the seat post. Tighten all bolts and screws until snug.

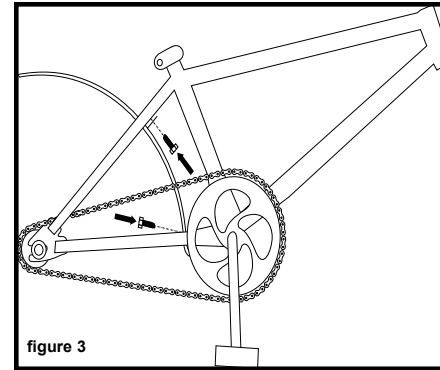


figure 3

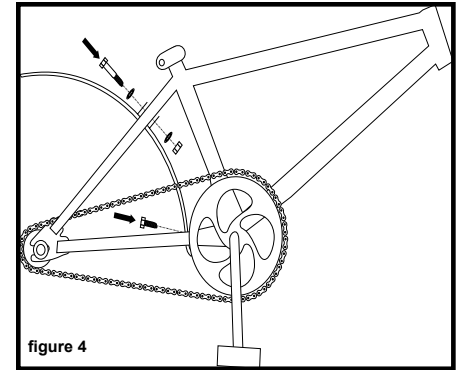


figure 4

## FINAL CHECK

- After all adjustments have been made, shift through every gear several times at varying speeds. This will ensure all your adjustments are correct and will allow you to pinpoint any trouble areas. If you encounter any problems, refer to the appropriate section and make any necessary adjustments.
- Check the tire pressure and inflate each tube to the recommended psi as stated on the sidewall of the tire.
- If your bicycle is equipped with a kickstand, check that the kickstand operates smoothly and the kickstand bolt is tightly secured.
- Finally, examine the bicycle. Make sure all accessories are attached and all quick releases, cam levers, nuts and bolts have been tightened securely.

Remember: Always wear a helmet and obey all traffic laws.

## SINGLE-SPEED AND BMX BICYCLES



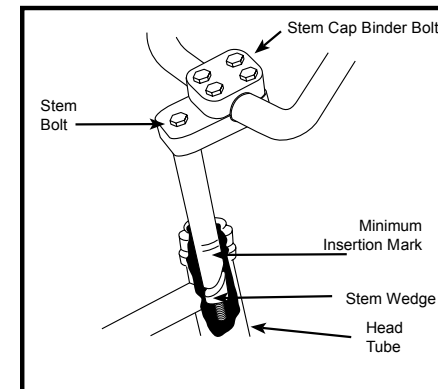
WE RECOMMEND THAT YOU CONSULT A PROFESSIONAL BICYCLE MECHANIC IF YOU HAVE DOUBTS OR CONCERNS AS TO YOUR EXPERIENCE OR ABILITY TO PROPERLY ASSEMBLY, REPAIR, OR MAINTAIN YOUR BICYCLE.

## GETTING STARTED

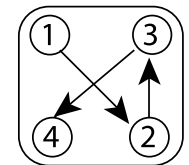
Open the carton from the top and remove the bicycle. Remove the straps and protective wrapping from the bicycle. Inspect the bicycle and all accessories and parts for possible shortages. It is recommended that the threads and all moving parts in the parts package be lubricated prior to installation. Do not discard packing materials until assembly is complete to insure that no required parts are accidentally discarded. Assemble your bicycle following the steps that pertain to your model.

## HANDLEBARS

Remove the protective cap from the stem wedge and loosen the stem bolt using the 6mm hex key. Some models may use a 13mm hexagonal bolt instead of an Hex key bolt. Place the handlebar stem into the head tube, observing the minimum insertion mark on the handlebar stem and ensuring that all cables are free of tangles. Check that the fork and the handlebar are facing forward, and that they are properly aligned with the front wheel. Tighten the stem bolt. Rotate the handlebar to the desired position. Tighten stem cap bolt 1 (see picture) two turns, tighten stem cap bolt 2 two turns and so on. Repeat until handle bar is secure to the stem. See picture for a 4-bolt system. Also check that the stem binder bolts are tightened equally and securely.



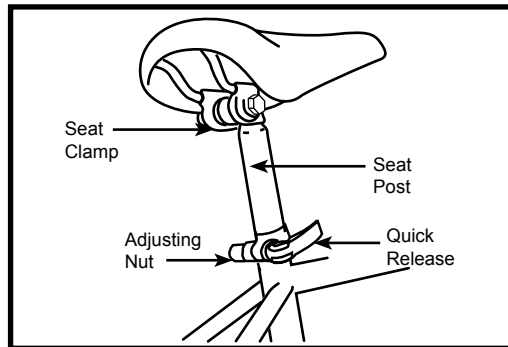
4-Bolt  
Face  
Plate



THE HANDLEBAR MUST BE INSERTED SO THAT THE MINIMUM INSERTION MARK CANNOT BE SEEN. WARNING: OVER TIGHTENING THE STEM BOLT OR HEADSET ASSEMBLY MAY CAUSE DAMAGE TO THE BICYCLE AND/OR INJURY TO THE RIDER.

## SEAT AND SEAT POST

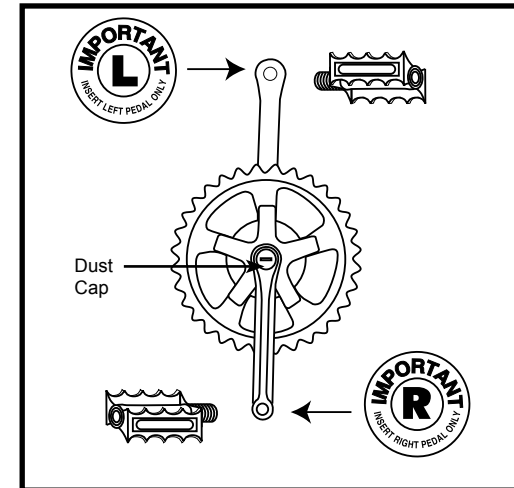
Attach the seat to the seat post if required by loosening the nuts on the seat clamp. Insert the tapered end of the seat post into the seat clamp until it is at the top of the clamp. Partially tighten the nuts on the seat clamp until the seat is snug, but can still be turned. Insert the seat assembly into the frame of the bicycle and adjust the seat to the proper height. The seat post must be inserted to at least the "Minimum Insertion" line marked on the seat post. If equipped with a quick release skewer, tighten the adjusting nut by hand and move the quick release lever to the closed position. You should feel considerable resistance while moving the lever. If not, re-open and re-tighten the lever, then move it to the closed position so it is in line with the frame as pictured. If equipped with a binder clamp; insure the lip on the binder clamp is fitted completely against the top of the seat tube of the frame. With the seat post inserted, tighten the binder bolt securely. Position the top of the seat parallel with the ground. Push the front of the seat up and down to firmly mesh the serrations together. The serrations must mesh completely together to insure a stabilized riding position. Securely tighten the nut on the seat clamp. If there is a nut on both sides of the clamp, tighten each one by alternating from one to the other. Check for tightness by twisting the seat from side to side, and from front to back. If the seat moves at the seat clamp or quick release, reposition and re-tighten the appropriate clamping mechanism.



THE SEAT POST MUST BE INSERTED SO THAT THE MINIMUM INSERTION MARK CANNOT BE SEEN. THE QUICK RELEASE MECHANISM MUST BE TIGHTENED SECURELY TO PREVENT A SUDDEN SHIFT OF THE SEAT WHEN RIDING. FAILURE TO DO THIS MAY CAUSE LOSS OF BICYCLE CONTROL.

## PEDALS

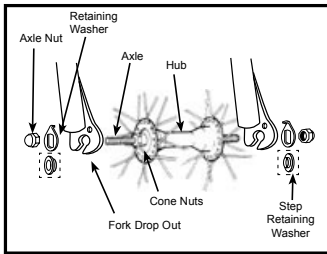
Look for the letters "R" for right, and "L" for left, stamped on each pedal spindle. Start each pedal spindle by hand to avoid stripping the threads. Tighten with a 15mm narrow open ended wrench. Note that the right hand pedal attaches to the chainwheel side crank arm with a right-hand (clockwise) thread. The left pedal attaches to the other crank arm and has a left-hand (counter-clockwise) thread. It is very important that you check the crank set for correct adjustment and tightness before riding your bicycle.



ATTACHMENT OF AN INCORRECT PEDAL INTO A CRANK ARM CAN STRIP PEDAL THREADS AND CAUSE IRREPARABLE DAMAGE. BEFORE YOUR FIRST RIDE, PLEASE CHECK TO INSURE YOUR PEDALS ARE ATTACHED CORRECTLY.

## FRONT WHEEL

1. Make sure the brakes are loose enough to allow the wheel to pass through the brake pads easily.
2. Place wheel into fork drop outs.
3. Install retaining washers with raised lip pointed towards the fork, and insert into the small hole of the fork blade. **NOTE:** Some bikes may have step retaining washers in place of the retaining washer (shown in dotted box). If so, install the step retaining washer, raised portion sliding in to the fork dropouts.
4. Install axle nut and tighten. Make sure the wheel is centered between the fork blades.
5. Spin the wheel to make sure that it is centered and clears the brake shoes. Tighten the brakes if necessary.
6. Turn the bicycle upright using the kickstand to support it, if your bicycle is equipped with one.

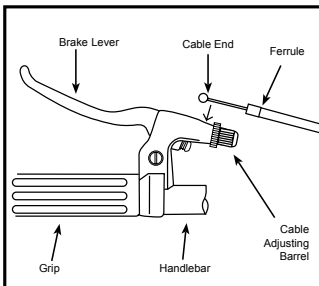


**IT IS VERY IMPORTANT TO CHECK THE FRONT WHEEL CONNECTION TO THE BICYCLE. FAILURE TO PROPERLY TIGHTEN MAY CAUSE THE FRONT WHEEL TO DISLodge.**

## BRAKES

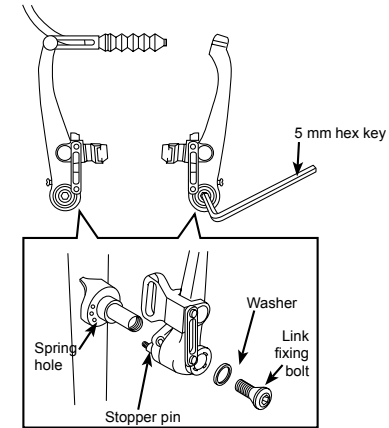
Determine which type of brake your bike is equipped with and refer to the appropriate assembly instructions. A greater force is required to activate the rear brake due to longer cable length. It is advisable to mount the rear brake on the side of the stronger hand. It is important to become familiar with the use of hand brakes. When properly adjusted, hand brakes are an efficient braking system. Keep the rim and brake shoes clean and free from wax, lubricants and dirt at all times. Keep brakes properly adjusted and in good working condition at all times.

Open the brake lever and place the cable end of the short brake cable into the lever, then close the lever. Secure the ferrule against the lever using the cable adjusting barrel.

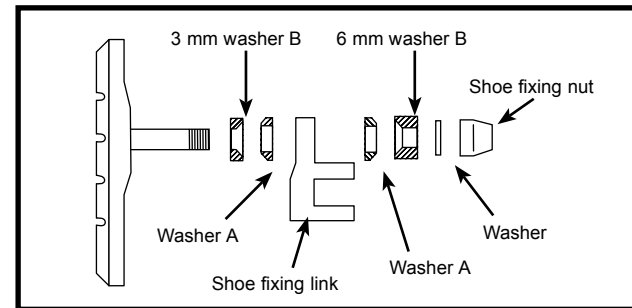
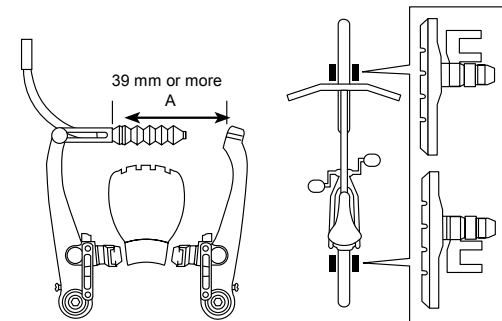


## V-Style Brake

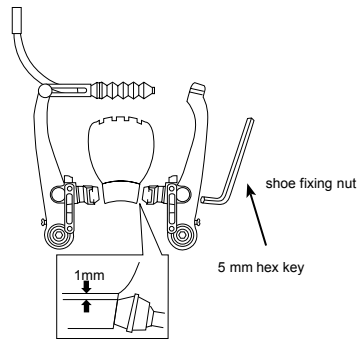
1. If fitted with V-Style Brakes, insert the brake body into the center spring hole in the frame mounting boss, and then secure the brake body to the frame with the link fixing bolt.



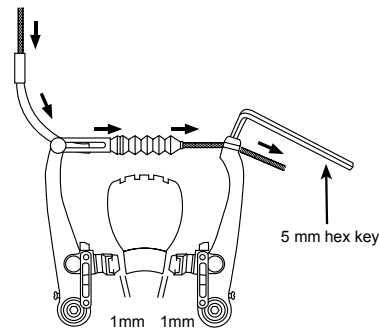
2. While holding the shoe against the rim, adjust the amount of shoe protrusion by interchanging the position of the B washers (i.e. 6 mm and 3 mm) so that dimension A is kept at 39 mm or more.



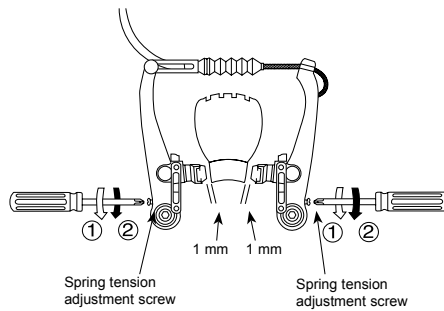
3. While holding the shoe against the rim, tighten the shoe fixing nut.



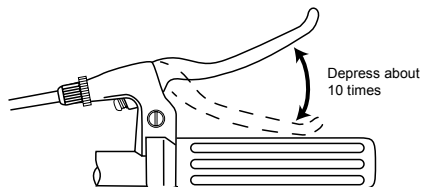
4. Pass the inner cable through the inner cable lead. Set the cable with a clearance of 1mm between each brake pad and the rim, tighten the cable fixing bolt.



5. Adjust the balance with the spring tension adjustment screws.



6. Depress the brake lever about 10 times as far as the grip to check that everything is operating correctly and that the shoe clearance is correct before using the brakes.

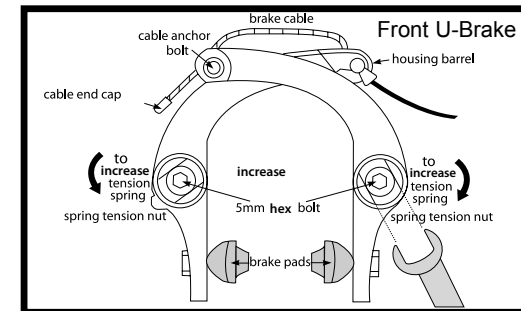


## U-BRAKES

Begin by adjusting the pads of the U-brakes using a 10mm wrench. Make sure the pad is hitting the rim and not the tire. Ideally the front of the pad should hit the rim approximately 1mm before the rear pad.

### Front U-Brake

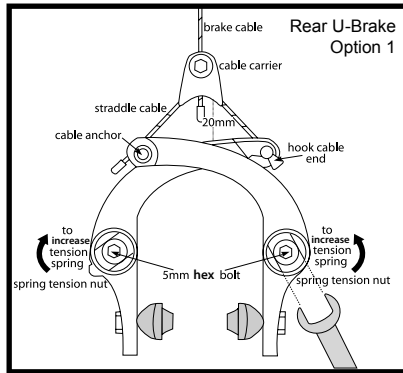
Slide the brake cable and housing through the Housing Barrel and through the cable anchor bolt. Set the cable clearance of 1mm between the brake pads and the rim. Tighten the cable anchor bolt. All instructions shown are if you are looking at the bike from the front. For brake adjustments, use a 13mm box end wrench and a 5mm hex wrench. Loosen the 5mm hex bolt. For the drive side (left) of the bike turn the spring tension nut with a 13mm box end wrench counter-clockwise to increase tension on the spring. For the non-drive side (right), turn spring tension nut with a box end wrench clockwise to increase tension on the spring. When the desired tension is achieved hold the tension nut with the 13mm wrench and tighten the 5mm hex bolt. The tension on each side should be equal so that the brake arms move the same distance when the brake is activated.



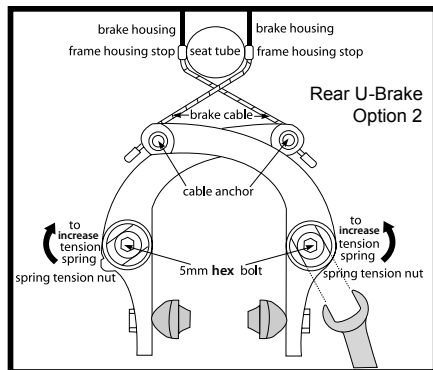


## Rear U-Brake

Option 1: Next, tighten the Cable Carrier to the brake cable approximately 20mm from the brake arms when they are closed against the rim. Attach the Straddle cable to the carrier. Hook cable end into the brake slot, pull excess straddle cable through the cable anchor and tighten the cable anchor. Continue with “For Both Options” below.



Option 2: Place brake housing into the frame housing stops. Pull brake cable tightly and thread across through the opposite cable anchor bolt. Tighten cable. Repeat for other side. Continue with “For Both Options” below.



For Both Options: For brake adjustments, use a 13mm open end wrench and a 5mm hex wrench and loosen the 5mm hex bolt. For the drive side (right) of the bike turn the spring tension nut with a 13mm open end wrench counter clockwise to increase tension on the spring. For the non-drive side (left), turn the spring tension nut with a box end wrench clockwise to increase tension on the spring. When the desired tension is achieved, hold the tension nut with the 13mm wrench and tighten the 5mm hex bolt. The tension on each side should be equal so that the brake arms move the same distance when the brake is activated.

PLEASE NOTE: that some BMX frames have the U-Brake flipped and mounted below the seatstays. The direction to tension the springs will still be oriented to how the picture is oriented.

## ROTORS

Some freestyle BMX bicycles come equipped with a detangler system that will allow the handlebar to spin 360-degrees without binding the cables. It is very important that this system is adjusted correctly. Installation should only be done by a qualified bicycle mechanic with the correct tools.

### Upper Cable

1. First connect the cable end of the upper cable to the rear brake lever. Make sure the long cable casing is on top of the short cable casing; otherwise, the upper cable will have a twist in it.
2. Route the upper cable through the handlebars (below the crossbar) with the short cable casing on the same side as the rear brake lever.
3. Connect the upper cable to the upper plate by passing the football ends of the upper cable through the threaded holes in the upper plate and connecting them to the bearing.
4. Screw the adjusting barrels into the upper plate. Don't tighten the locknuts at this time.

### Lower Cable

1. Slide the cable casing through the cable guide on the frame.
2. Connect the lower cable to the lower plate by passing the football ends of the lower cable through the threaded holes in the lower plate and connecting them to the bearing.
3. Screw the adjusting barrels into the lower plate. Don't tighten the locknuts at this time.
4. Connect the lower cable to the rear brake. Don't adjust the rear brake at this time.

NOTE: Check to make sure all 11 cable casing ends on the upper and lower cables are seated correctly, and that the spring tension of the rear brake is pulling the bearing down.

### Adjustment

1. Screw the cable adjusters on the rear brake lever and the upper cable splitter all the way in.
2. Screw the adjusting barrels in the upper plate in (or out) to set the bearing for maximum travel. The bearing should be as far down as it can go without resting on the lower plate or the adjusting barrels screwed into the lower plate.
3. Use the adjusting barrels that are screwed into the upper plate to make the bearing parallel to the upper plate. Use a 10mm wrench to tighten the locknut on the left adjusting barrel of the upper cable. Leave the right adjusting barrel loose.
4. Screw the lower cable adjusting barrel into (or out of) the lower plate until they are as close to the bearing as they can get without touching it.
5. Screw the cable adjuster on the upper cable splitter out until all slack is removed from the upper cable. Then screw the cable adjuster out one more turn to raise the bearing an additional 1mm away from the lower cable adjusting barrels.

CAUTION: Don't screw the cable adjuster on the upper cable splitter out more than 8mm. Use the cable adjuster on the rear brake lever if more adjustment is needed.



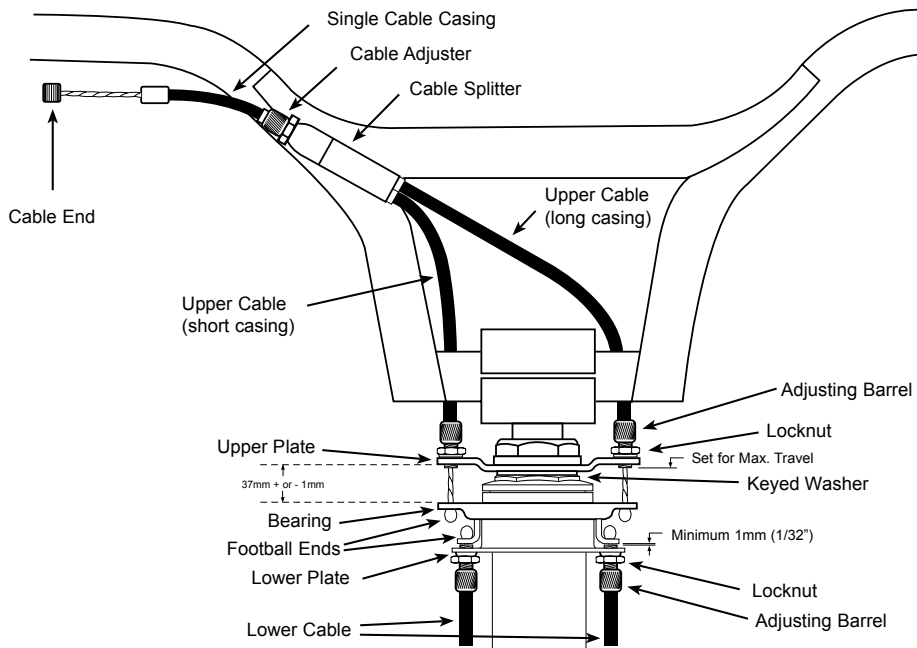
DO NOT LOCK UP BRAKES. SUDDEN OR EXCESSIVE APPLICATION OF THE FRONT BRAKE MAY PITCH THE RIDER OVER THE HANDLEBARS, CAUSING SERIOUS INJURY OR DEATH. WHEN BRAKING, ALWAYS APPLY THE REAR BRAKE FIRST, THEN THE FRONT.

- Check for bearing flop by placing the handlebars in the normal riding position, then quickly rotate the handlebars back and forth. Perform the following steps to eliminate bearing flop.

NOTE: The bearing should never be allowed to rest on the lower plate or lower cable adjusting barrels.

- Screw the lower cable adjusting barrels out of (or into) the lower plate until all bearing flop is eliminated.
- Tighten the locknut of the right adjusting barrel on the lower cable.
- Rotate the handlebars 180 degrees and recheck for bearing flop. If there is any bearing flop, use the "loose" adjusting barrels on the upper and lower cable to remove it.
- Repeat steps (6a) and (6c) until the handlebars can be rotated 360 degrees without any bearing flop.

- Finish adjusting the rear brakes.



**DO NOT RIDE THE BICYCLE UNTIL THE BRAKES ARE FUNCTIONING PROPERLY. TO TEST, APPLY THE BRAKES WHILE TRYING TO PUSH THE BIKE FORWARD TO MAKE SURE THEY WILL STOP THE BICYCLE. NEVER RIDE A BICYCLE THAT IS NOT FUNCTIONING PROPERLY.**

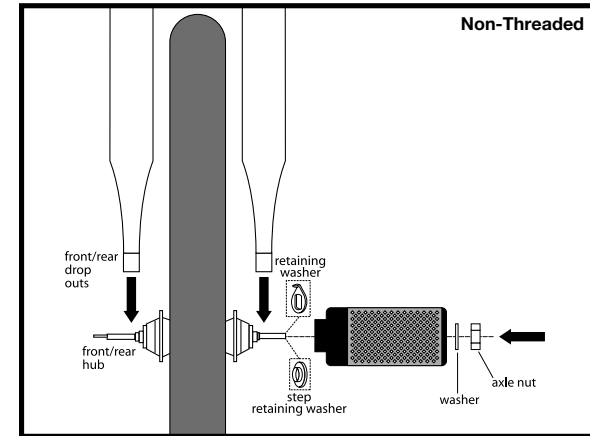
**PRESS EACH BRAKE LEVER TO MAKE SURE THAT THERE IS NO BINDING AND THAT THE BRAKE PADS PRESS HARD ENOUGH ON THE RIMS TO STOP THE BIKE. THE BRAKE PADS SHOULD BE ADJUSTED SO THEY ARE 1 MM TO 2 MM AWAY FROM THE RIM WHEN THE BRAKES ARE NOT APPLIED. BRAKE PADS SHOULD BE CENTERED ON THE RIM AND "TOED-IN" SO THE REAR PORTION OF EACH BRAKE PAD IS ABOUT 0.5 - 1.0 MM FARTHER FROM THE RIM THAN THE FRONT PORTION OF THE BRAKE PAD.**

## ACCESSORIES

### AXLE PEG ASSEMBLY INSTRUCTIONS

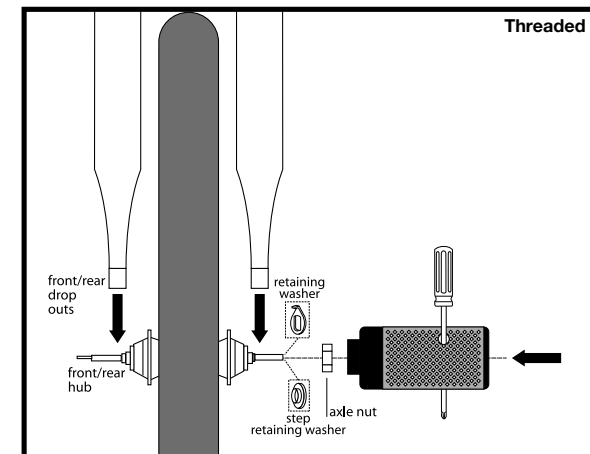
#### Non-Threaded

First remove the axle nut from the wheel. There will be either a retaining washer or a step retaining washer included. Place this washer between the peg and the frame of the bicycle. Slide the peg onto the axle, followed by a flat washer and lastly the axle nut. Tighten the axle nut clockwise until the peg fits snugly against the frame or fork. Repeat for all the remaining pegs.



#### Threaded

This style of peg is threaded to fit the axle. Make sure the axle nut is tight with a 15mm wrench. Place a screw driver through the mounting holes of the peg and attach the peg to the axle by turning clockwise. Tighten against the frame or fork for a snug fit. Repeat for all the remaining pegs.



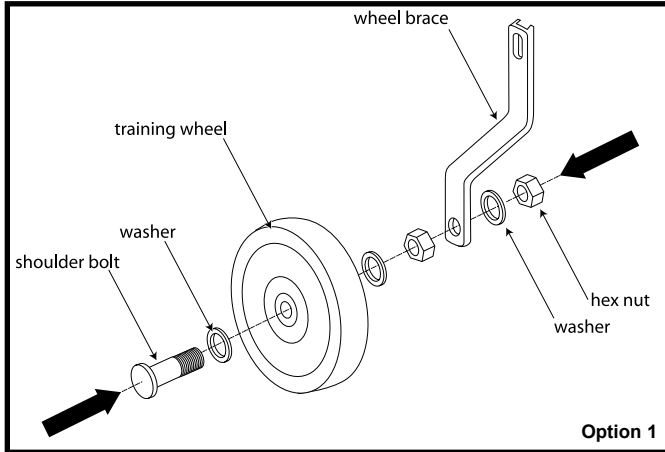
PLEASE NOTE: Not all axles are able to accept axle pegs. Please consult an authorized Nishiki dealer if you have any questions.

## TRAINING WHEELS

There are two options when attaching the training wheels to the wheel brace. Determine which option is used on your bicycle and follow the given instructions for that option.

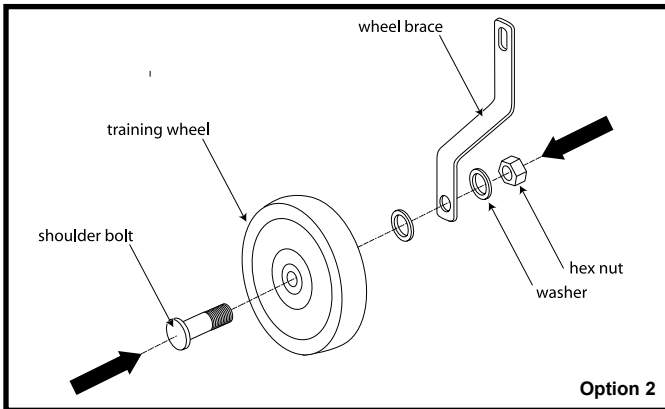
### Option 1

First attach the training wheels to the wheel brace. Position a washer on the shoulder bolt. Next, insert the shoulder bolt through the wheel. Follow with another flat washer then completely thread a hex nut onto the shoulder bolt. Insert the shoulder bolt through the wheel brace and set the washer on the shoulder bolt. Lock the training wheel into place by screwing another hex nut onto the shoulder bolt. Repeat for both training wheels.



### Option 2

First attach the training wheels to the wheel brace. Insert the shoulder bolt through the wheel. Follow with a flat washer. Insert the shoulder bolt through the wheel brace and set the washer on the shoulder bolt. Lock the training wheel into place by screwing another hex nut onto the shoulder bolt. Repeat for both training wheels.

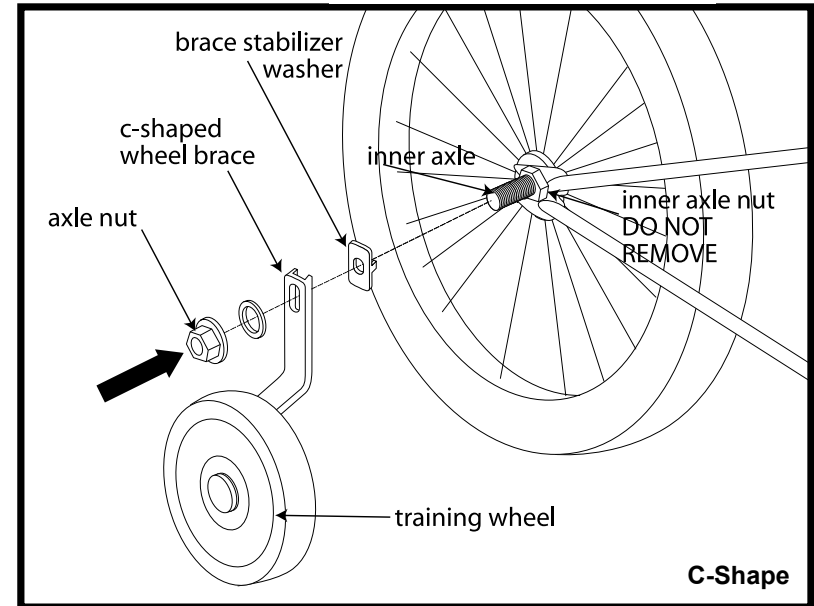


## ATTACHING TRAINING WHEEL BRACE TO BICYCLE

There are two different braces used to attach the training wheels to the bicycle: the C-Shape Brace and the Flat Brace. Determine which brace was included with your bicycle and follow the given instructions for that particular brace.

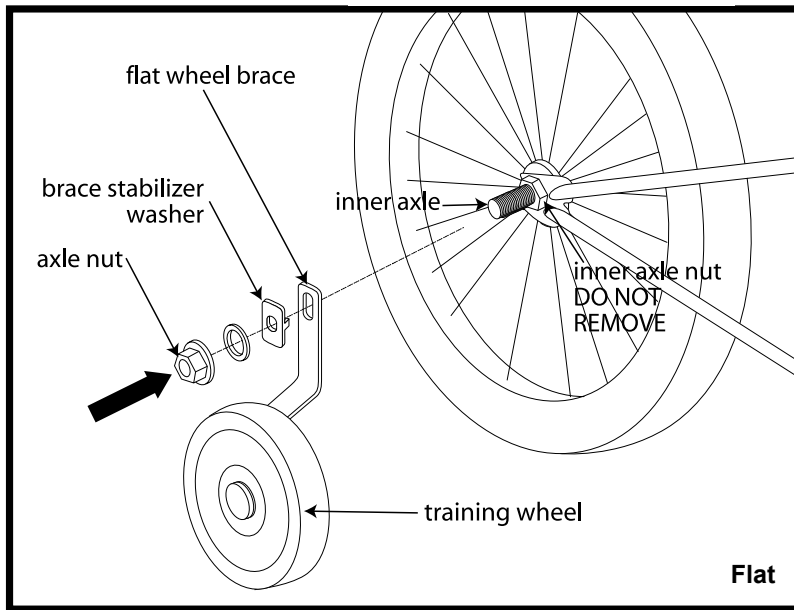
### C-Shape Brace

Remove the axle nut and washer from the rear wheel axle. Place the brace stabilizer washer onto the axle and align the washer so that the notch on the washer fits into the rear frame drop out. Next, place the C-shaped wheel brace onto the axle and replace the washer and axle nut. Tighten the axle nut securely, making sure that the wheel brace stays in the proper vertical position. The elongated hole on the wheel brace allows the training wheel height to be adjusted for proper fit.



## Flat Brace

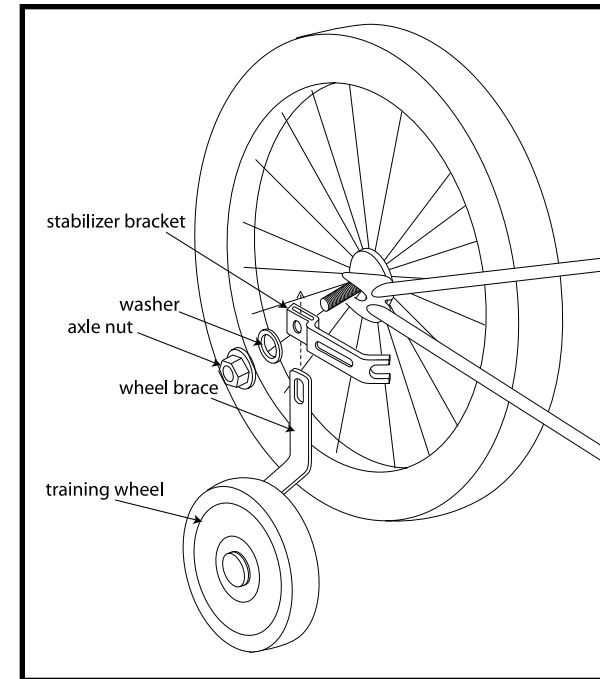
Remove the axle nut and washer from the rear wheel axle. Place the flat wheel brace onto the axle. Next place the brace stabilizer washer onto the axle and align it so that the notch fits into the rear frame drop out. Replace the washer and axle nut. Tighten the axle nut securely, making sure that the wheel brace stays in the proper vertical position. The elongated hole on the wheel brace allows the training wheel height to be adjusted for proper fit.



## TRAINING WHEEL STABILIZER BRACKET

Your bicycle may include a stabilizer bracket to attach the training wheel to the bicycle. First remove the nut and washer from the rear wheel axle. Align the stabilizer bracket onto the brace. Align the brace and stabilizer bracket on the wheel axle. Replace the axle nut and washer, secure tightly. The elongated hole on the brace allows for raising and lowering the training wheel to the proper height.

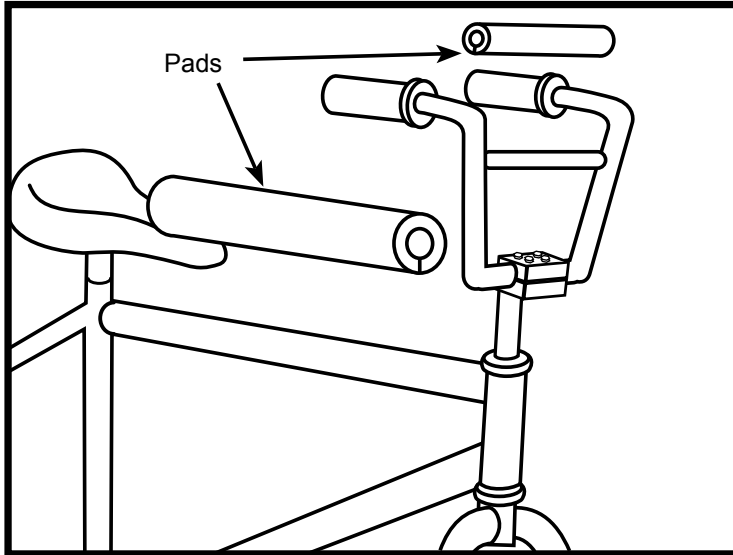
NOTICE: Not all bicycles will accept training wheels. If your bike did not come with training wheels, please consult an authorized Diamondback dealer to determine if you can install any.



IT IS VERY IMPORTANT TO CHECK THE TRAINING WHEEL CONNECTION TO THE BICYCLE. FAILURE TO PROPERLY TIGHTEN MAY CAUSE THE TRAINING WHEEL TO DISLodge. PLEASE CONTACT AN AUTHORIZED DIAMONDBACK DEALER WITH ANY QUESTIONS.

## PADS

If your bike is supplied with pads, wrap the foam inner cushion around the appropriate bar. Place the outer cover over the inner cushion and press the hook & loop closure together securely. Turn the pad so the closure faces the ground.



## FINAL CHECK

Install any additional parts that are supplied with your bike.

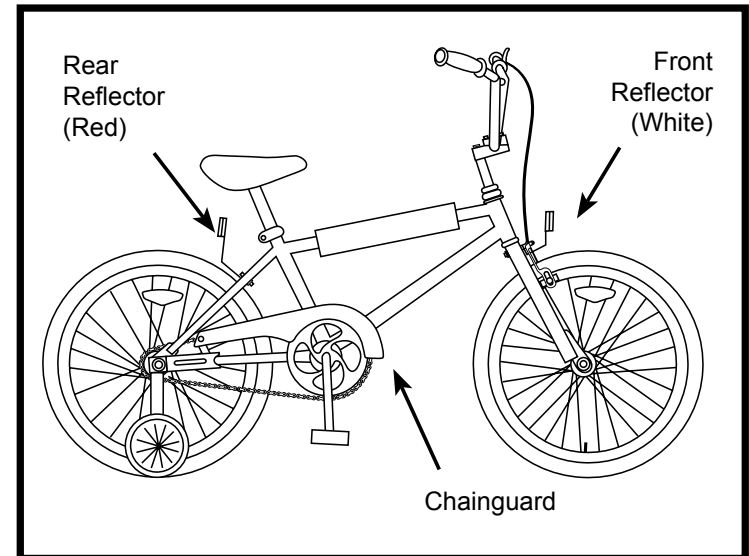
NOTE: Your bicycle may be equipped with different style components than the ones illustrated.

**Reflectors:** Attach the white reflector to the front bracket and the red reflector to the rear bracket using an 8mm wrench or a Phillips head screwdriver. Attach the brackets to the bicycle using the hardware provided. For some models, the front reflector bracket will be mounted on the front brake assembly bolt that fits through the fork. It is important to make sure all connections are tightened securely and that the reflectors are properly angled.

**Chainguards:** If not already attached, attach the chainguard to the bicycle frame using the clamps provided. Secure in place making sure the guard does not bind or get caught on the chain.

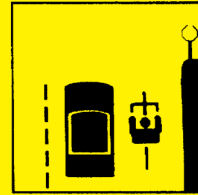
**Tire Pressure:** Check tire pressure, inflate to the recommended PSI as stated on the sidewall of the tire.

**Kickstand:** If your bicycle is equipped with a kickstand, check that the kickstand operates smoothly and the kickstand bolt is tightly secured.

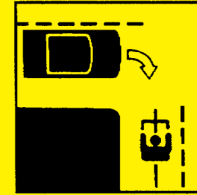


BEFORE RIDING, ENSURE ALL NUTS, BOLTS AND FITTINGS ON THE BICYCLE HAVE BEEN CORRECTLY TIGHTENED AND ALL ACCESSORIES ARE SECURED.

APPENDIX F  
Bicycling In Traffic



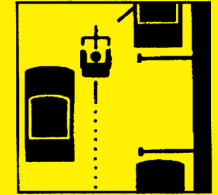
**Obey traffic signs & signals –**  
Bicycles must drive like other vehicles if they are to be taken seriously by motorists.



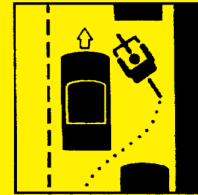
**Never ride against traffic –**  
Motorists aren't looking for bicyclists riding on the wrong side of the road.



**Use hand signals –** Hand signals, using your left arm, tells motorists what you intend to do. Signal as a matter of law, courtesy, and safety.



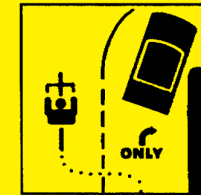
**Ride in a straight line –**  
Whenever possible, ride in a straight line, to the right of traffic, but about a door's width away from parked cars.



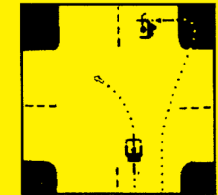
**Don't weave between parked cars –**  
Don't ride out to the curb between parked cars unless they are far apart. Motorists may not see you when you try to move back into traffic.



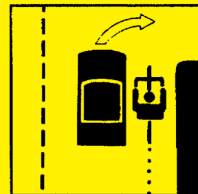
**Ride in middle of lane in slow traffic –**  
Get in the middle of the lane at busy intersections and whenever you are moving at the same speed as traffic.



**Follow lane markings –** Don't turn left from right lane. Don't go straight in a lane marked as Right Turn Only.



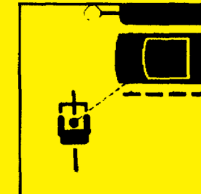
**Choose best way to turn left –**  
There are two ways to make a left turn. #1 Like an auto – Signal, move into the left lane and turn left. #2 Like a pedestrian – Ride straight to the far side crosswalk. Dismount and walk your bike across.



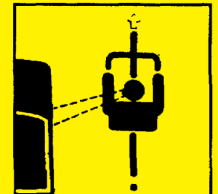
**Don't pass on the right –**  
Motorists may not look for, or see a bicycle passing on the right.



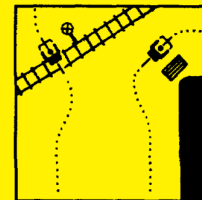
**Go slow on sidewalks –**  
Pedestrians have the right of way. By law, you must give pedestrians audible warning when you pass. Don't cross driveways or intersections without slowing to a walkers' pace and looking very carefully for traffic (especially traffic turning right on a green light).



**Watch for cars pulling out –**  
Make eye contact with driver. Assume they don't see you until you are sure they do.



**Scan the road behind –**  
Learn to look back over your shoulder without losing your balance or swerving left. Some riders use rear view mirrors.



**Avoid road hazards –** Watch out for parallel slat sewer grates, slippery manhole covers, oily pavement, gravel and ice. Cross railroad tracks carefully at right angles. To get better control as you move across bumps and other hazards, stand up on your pedals.



**Keep both hands ready to brace –**  
You may not stop in time if you brake one-handed. Allow extra distance for stopping in the rain, since brakes are less efficient when wet.



**Watch for chasing dogs –**  
Ignore them or try a firm "NO!" If the dog doesn't stop, dismount with your bike between you and the dog. Dogs are attracted to spinning wheels and feet.

