winwood™

Winwood™ DeeDee™
29" Carbon Suspension Fork

Owner's Manual

Congratulations!

You have just purchased one of the most advanced forks available on the market. This Winwood fork features a unique and consumer-friendly concept which is superior to most other brands.

Please read this owners manual carefully before riding to experience all the possibilities this fork offers you and to make sure that you know and follow all the safety and maintenance instructions.

What Separates the Winwood™ DeeDee™ From the Competition

It's a simple system

The Winwood DeeDee 29" fork utilizes a modular design. All parts have been simplified into fewer self-contained components. Unlike other forks, the spring and damping system can easily be replaced or maintained. This makes for a highly reliable, easily serviced fork.

Tunable

The Winwood DeeDee Air fork is exceptionally tunable for a wide range of riders and riding styles. The Winwood DeeDee Coil Spring fork stock springs cover a wide range of riders but can be swapped and modified for further fine tuning. The Damper/Lockout cartridge is replaceable and the oil is also easily replaceable. After awhile, if you care to change your fork from spring to air, or vice versa, the parts are modular and available. To upgrade your fork from spring/MCU version to air spring, just take out the spring/MCU combination and replace it with an air cartridge. Both Winwood DeeDee forks come with an adjustable compression damper cartridge with lockout. For tuning kits, repair or replacement parts, and upgrade options, see your Winwood dealer.

The Latest in High-Tech Carbon Fiber

The Winwood DeeDee forks combine the latest technology of carbon fiber and high strength aluminum alloys. The one-piece lower leg assembly utilizes the best properties of carbon and aluminum. The aluminum skeletal structure provides the necessary precision and alignment for the internal working parts. The carbon fiber overwrap provides strength and stiffness necessary in a high performance fork while significantly reducing weight versus an all-aluminum fork. Other high wear areas of the fork are made of aluminum for durability. The exposed carbon fiber weave adds elegance and a desirable aesthetic to this already functional and practical fork.

Installation

Important Safety Instructions: It is extremely important that your Winwood fork is installed correctly by a Qualified Independent Bicycle Dealer. Improperly installed forks are dangerous and can result in loss of control of the bicycle and severe or fatal injuries. Failure to follow these instructions may also void the warranty.

1) Make sure you have the correct headset to work with our fork. The Winwood DeeDee forks are available only in 1-1/8" threadless steerers with 30.0mm crown race seat diameter

> **Warning! Do not add threads to the threadless steerer. Do not attempt to replace the steerer tube as it needs to be press fit under very high pressure.**

2) Install the headset cups into the frame according to the headset manufacturer's instructions. Support the fork under the crown during this step. While holding the fork in one hand, install the headset's fork crown race onto the fork race seat with a **headset crown race setting tool. Take care not to install the crown race with the fork dropouts resting on the floor or any other hard surface, you will damage the fork rendering it unsafe and dangerous or deadly to ride.** Now assemble the bottom half of the headset according to the manufacturer's instructions and insert the fork into the headtube. Install the top half of the headset according to the manufacturer's instructions. Install any and all desired stack spacers.
3) Inspect your stem to make sure the steerer clamp area is clean and free of burrs. Install the stem on the steerer and slide it down to seat it firmly against the spacers or top of the headset. Gently tighten the stem's steerer clamp bolt(s) just enough to hold the assembly in place.
4) Mark the steerer tube where it pokes out the top edge of the stem. Remove the stem from the steerer and the fork from the bike, and then re-mark the steerer tube 3mm below the first mark. This will be your cutting mark.
5) Using a hacksaw with a fine-toothed metal-cutting blade, cut the steerer on the cutting mark. The use of a steerer tube-cutting guide is strongly recommended to ensure a square cut. Using a file, remove any burrs on the freshly cut edge of the steerer tube.
6) Install the star nut supplied with your headset into the steerer tube per the manufacturer's instructions. **Take care not to install the star nut with the fork dropouts resting on the floor or any other hard surface, you will damage the fork rendering it unsafe and dangerous or deadly to ride**.
7) Reinstall the fork/headset/stem assembly and tighten the stem's steerer clamp bolt(s) enough to hold the assembly in place.
8) Install the top cap and bolt supplied with your headset per the manufacturer's instructions. Loosen the stem's steerer clamp bolt(s), and preload the top cap to attain proper headset adjustment in accordance with the headset manufacturer's instructions.

9) Attach the front wheel to the fork and align the stem with the front wheel. **Tighten the stem's steerer clamp bolt(s) to the stem manufacturer's torque specifications using a torque wrench**. If the stem can be twisted around the steerer after the stem bolts have been tightened, the stem is not tight enough. Repeat steps above as necessary to achieve proper headset adjustment, stem alignment, and stem tightness. Inspect the fork for damage before every ride.
10) Brake installation: follow brake manufacturer's instructions for cantilever, linear pull cantilever, or ISO disc brake installation.

General Warnings and Instructions

This Winwood fork is designed for off-road use by a single rider. It is not designed for excessive riding such as jumps, curbs, stunt riding or other reckless behavior. To use it on-road you will have to follow your country's specific traffic regulations and laws and equip your bike and your fork accordingly.

Do not ride your bike if you notice technical problems such as material failures like bending, cracking in the carbon fiber or broken parts. Immediately take your bike to a qualified bicycle dealer to prevent further damage. Failure may result in damage and severe and/or fatal injuries.

Make sure the quick release lever is tightened and the hub axle is correctly fixed in the bore of the dropouts. Orient the quick release lever in front of and parallel to the lower tube and make sure it is in the locked position.

Adjust the headset according to headset manufacturer's instructions (see above).

Install the brakes according to the manufacturer´s instructions and adjust rim or disc brake pads properly. Use the fork only with brakes fitting to the existing brake mounts (cantilever bosses or ISO disc brake mounting tabs). Before riding the bicycle, be sure the brakes are properly installed and work properly.

Do not disassemble any of the cartridges (e.g., oil or air). High pressure inside the cartridges may cause injuries and disassembly may lead to damage.

Disassembly and maintenance/replacement of the fork or its components beyond that which is outlined in this manual should be made by a Winwood dealer/qualified bicycle dealer.

Avoid directing water pressure hose at the inner leg and / or seals.

Be cautious when mounting the bicycle to a fork mounted bike rack, the dropouts could be damaged. Follow the bike rack manufacturer's loading instructions for proper rack attachment.

If your bike is transported by air freight and the fork features the air spring system, we strongly recommend that the air cartridge is deflated before transport to avoid damage and to guarantee proper function after transport.

After any crash, have your bike and your fork inspected by a qualified dealer as damages not obvious to the consumer may occur.

Always use genuine Winwood parts. Use of different parts voids the warranty and could cause structural failure of the fork and therefore loss of control of the bike with possible damages and / or severe or fatal injuries.

Maximum tire clearance on the Winwood DeeDee fork is 29 x 2.3" wide tires.

Performance Tuning

Please follow the applicable instructions for the spring and damping system featured in your particular Winwood fork.

DeeDee Coil Spring / MCU

The DeeDee Coil fork is equipped with on the fly adjustable preload that provides a wide range of tuning. Stock spring rates will accommodate most average weight riders, however, there are several aftermarket springs available for fine tuning your fork characteristics to your weight and riding style.

Preload: Turning the adjustment knob at the top of the left leg (when sitting on the bike) changes the initial force required to activate the suspension fork. Turning the preload knob clockwise (+) increases the preload and stiffness of the fork. Turning the preload knob counterclockwise (-) decreases the preload and stiffness of the fork resulting in a softer ride.

A recommended starting point is to set the preload so that the fork has 15% sag when you are sitting on the bike. This will allow optimal performance of the fork over bumps and holes. When sitting on the bike in normal riding position, adjust the preload so the fork is compressed 12-13mm. You can vary this sag according to personal riding preferences.

Spring Rate: If desired ride characteristics are unattainable using the preload adjuster, different springs are available for additional fine-tuning of your fork. There are three different spring kits available, soft, medium, and firm. Each kit contains two springs and an MCU. The DeeDee Coil fork comes stock with two medium springs. Two springs are needed for the left leg of the fork.

Please see list below for recommended rider weight spring combinations:

Soft Kit: for riders less than 65kg/143 lbs
Medium Kit: for riders between 65-85kg/143-187lbs (stock springs)
Firm Kit: for riders over 85kg/187lbs

Any number of spring combinations can be used to fine-tune the ride characteristics of your fork. The overall stack of springs, mcu and two plastic spacers (included in fork and spring kits) must measure 220mm. When mixing springs, this stack height can be achieved by custom cutting the MCU to proper length.

Please consult your Winwood Dealer for authorized replacement and tuning parts.

DeeDee Air Spring

The DeeDee Air fork has an adjustable air cartridge (spring) that must be pressurized using an appropriate high pressure shock pump with Schrader fitting (such as the Buzzy's Pollinator Shock Pumps). This type of air pressure tuning allows for an extremely wide range of rider weight and riding styles.

To set the air pressure for your weight, remove the top cap from left leg and the valve cap from the valve underneath the cap. Attach pump according to pump manufacturer's instructions. Inflate to recommended air pressure according to table below. Maximum air pressure is 181 PSI / 12.5 bar.

The following guidelines roughly show the recommended positive air pressure depending on the rider´s weight:

Rider's weight	Air pressure
Less than 143 lbs / 65 kg	123 PSI / 8.5 bar
143 – 165 lbs / 65 – 75 kg	137 PSI / 9.5 bar
165 – 187 lbs / 75 – 85 kg	152 PSI / 10.5 bar
187 – 209 lbs / 85 – 95 kg	167 PSI / 11.5 bar
209 – 242 lbs / 95 – 110 kg	181 PSI / 12.5 bar

Hydraulic Damping and Lockout (DeeDee Coil and DeeDee Air models)

Rebound of the hydraulic damper can be fine tuned by turning the external damping/lockout lever on the top of the right leg. Slower rebound means that the outward movement of the fork after compression is slower (in other words, the damping is higher). For slower rebound, turn the lever clockwise (+). Faster rebound brings the fork back to its original position faster. For faster rebound, turn the damping/lockout lever counterclockwise (-).

For bumpy rides we recommend that you set your fork to rebound as fast as possible without topping out. Too much damping will not allow your fork to rebound and prepare for additional bumps along the trail. Do not try to turn the rebound adjuster past its limits.

Additionally, the travel of the fork can be completely blocked by the lockout system. Turn the damping/lockout lever clockwise (same direction as slow rebound) until it stops in the lockout position. This will severely limit the travel of the fork to just a few millimeters. We recommend locking the fork out when climbing uphill or when no front suspension is needed. The slight movement of the fork when locked out is required to avoid damage to the cartridge and internals of the fork.

Furthermore, if the stock damping of the Winwood DeeDee fork is not to the rider's preference, it can be custom tuned to suit the rider's tastes by changing the weight of the fork oil. Stock fork oil is 2.5 wt bicycle fork suspension oil. We recommend using suspension specific fork oils such as those from companies like Buzzy's, Spectro, or Finish Line. These oils have additives specially designed to lubricate and maintain the internals of suspension forks. Please refer to the Maintenance section for instructions on changing the fork oil.

For additional information, please ask your Winwood dealer.

Maintenance

To maintain safety, long life and high performance of your Winwood fork, periodic maintenance is required. If you frequently ride in wet, muddy or other extreme conditions, a 50% reduction of recommended maintenance intervals listed below is necessary.

After every ride clean and dry the exterior of your fork.

After every 25 hours of riding you should insert lithium-free grease via the grease fittings on the back side of both legs and make sure that the fork is well greased. The grease fittings on Winwood DeeDee forks are designed for needle type grease injectors such as a Dualco, Pedro's, or Finish Line grease guns. Note: The fork was designed to use suspension specific grease such as Buzzy's Slick Honey. This grease is fairly thin and will spread evenly throughout the fork when injected into the grease ports. In particularly wet climates, use of a slightly thicker grease may be advantageous but could also increase the damping of the fork slightly.

We recommend having your fork fully serviced, including replacing the shock oil by an authorized dealer or Shock Treatment Center™ after every 100 hours of use or every season, whichever comes first. Refer to the overhaul/replacement procedures section of this manual for full service instructions.

Overhaul / Replacement Procedures

For all maintenance procedures
When the fork is disassembled, clean parts with a non-corrosive degreaser, then dry parts thoroughly. When parts are dry, inspect parts carefully for signs of damage or leaking oil**. If there are signs of damage, immediately replace part before assembling and riding fork.** Prior to assembly, apply liberal amounts of non-lithium based suspension grease, such as Buzzy's Slick Honey Grease, to all moving parts. This includes bushings, stanchions, springs, MCUs, damper rod, compression rod or air compression rod. Also apply a light film of grease to all threads on caps and bolts.

Maintenance and Replacement of Damper/Lockout Cartridge

Please refer to the following disassembly procedures and exploded view diagrams and follow these instructions carefully.

Changing the Oil:

1) Holding the fork in an upright potion, remove the Damper/Lockout Cartridge (6) from the right side of the crown and stanchion assembly (1) Using a 1 1/8" socket or wrench.
2) Turn the fork over emptying the oil into an appropriate container. With the fork upside down, compress the fork 2 or 3 times to make sure you drain out all oil from the leg.
3) Inspect the fork oil. If it is particularly dirty you should consider full disassembly and thorough cleaning outlined in the Overhaul section. Dispose of used fork oil in an appropriate, ecologically friendly manner.
4) Fill the leg with 75 mL of appropriate fork oil. Stock weight oil is 2.5 wt. Heavier oil will increase fork damping. Lighter fork oil will decrease damping.
5) Replace Damper/Lockout cartridge into leg of fork slowly. Make sure the Cartridge is NOT in the locked out position. There should be enough fork oil in the leg so that it just starts to overflow from the top of the leg when the Damper/Lockout cartridge begins to thread into the leg. If the oil does not just overflow, add 1 to 2 mL more fork oil until it does. Filling the leg completely with fork oil is important for proper Lockout function.
6) Tighten the Damper Lockout Cartridge (6)to a torque of 144-180 in-lbs (16-20 Nm)
7) Wipe any spilled fork oil from the exterior of the fork.

Overhaul:

1) Perform steps 1 and 2 from the Oil Change procedure listed above.
2) Remove the M6 Bolts(5) from the bottom of both lower legs(2).
3) Holding the Crown/Stanchion assembly(1) in one hand and the lower leg assembly(2) in the other, pull the lower leg assembly away from the crown/stanchion assembly (1) with a quick forceful pull. Completely remove the lower leg assembly (2) from the crown stanchion assembly(1).
4) Remove the C-Clip(11) from the bottom of the right stanchion using C-clip pliers.
5) Pull down on the Damper Compression Rod(7) to remove the Damper Compression Rod(7), rubber washer(8), Damper Compression Rod Bushing/Oil seal(9) and the Aluminum washer(10). This can also be done by inserting a wood dowel into the top of the fork leg and gently tapping on the top of the Damper Compression Rod(7) until it slides out the bottom of the leg.
6) Slide the other parts off of the Damper Compression Rod(7).
7) Remove the plastic bushing that is wrapped around the head of the Damper Compression Rod(7). Note: There is no need to remove the bolt on the top of the Damper Compression Rod for cleaning or repair.
8) Thoroughly clean all parts with a non-corrosive, plastic friendly degreaser and wipe dry or air dry. Also clean the inside and outside of the stanchion tube(1) and the inside of the lower leg(2) with clean lint free cloths or rags.
9) Begin assembly with the reverse of steps 2 through 7.
10) Fill the leg with 75 mL of appropriate fork oil. Stock weight oil is 2.5 wt. Heavier oil will increase fork damping. Lighter fork oil will decrease damping.
11) Replace Damper/Lockout cartridge(6) into leg of fork slowly. Make sure the Cartridge is NOT in the locked out position. There should be enough fork oil in the leg so that it just starts to overflow from the top of the leg when the Damper/Lockout cartridge begins to thread into the leg. If the oil does not just overflow, add 1 to 2 mL more fork oil until it does. Filling the leg completely with fork oil is important for proper Lockout function.
12) Tighten the Damper Lockout Cartridge(6) to a torque of 144-180 in-lbs (16-20 Nm).
13) Wipe any spilled fork oil from the exterior of the fork.
14) Torque M6 Bolts(5) at the bottom of each leg to 120 in-lbs(13.5 Nm).

Maintenance and Replacement of springs or MCU

Please refer to the exploded view drawings of the DeeDee Coil fork model on the following pages and follow these steps carefully:

Changing Springs:

1) Decrease preload to lowest setting (full counter clockwise)
2) With a 1 1/8" wrench or socket, loosen and remove the preload adjuster assembly(12) from the left stanchion(1).
3) Remove MCU(13), Springs(15) and plastic spacers (14,16) from leg. Turning the fork upside down or using the hooked end of a spoke are effective methods for removing the springs from inside the leg.
4) Assembly is the reverse of above steps. Be sure to grease MCU(13), Springs(15) and plastic spacers(14,16) with appropriate non-lithium grease.
5) Torque preload adjuster cap to 144-180 in-lbs(16-20Nm)

Overhaul of Springs and Fork internals:

1) Perform Steps 1 through 3 from Changing Springs procedure.
2) Remove both M6 bolts(5) from the lower leg assembly(2). This may require holding the Spring Compression Rod from rotating using an extra long 5mm Allen key such as those made by Lifu. Insert the Allen key into the head of the bolt at the top of the spring compression rod and then remove the M6 bolt at the bottom of the leg.
3) Pull lower leg assembly(2) off of the crown and stanchion assembly (1).
4) Remove bottom out bumper(22) from the spring compression rod(17).
5) Remove c-clip(21) using c-clip pliers.
6) Then remove the spring compression rod(17) by pulling down. This should also remove the compression rod bushing(20), the top out bumper(19) and the o-rings(18).
7) Assembly is reversal of the above steps.
8) Torque M6 bolts(5) at bottom of both legs to 120 in/lbs (13.5 Nm).
9) Torque the preload adjuster cap to 144-180 in-lbs (16-20 Nm).

<u>Available Coil Springs:</u>
Left: hard = 3.5 kg/mm (72 mm long)
Middle: medium = 2.2 kg/mm (70 mm long)
Right: soft = 1.6 kg/mm (90 mm long)

Replacement of Air Cartridge

Please refer to the exploded view drawings of the DeeDee Air fork model on the following pages and follow these steps carefully:

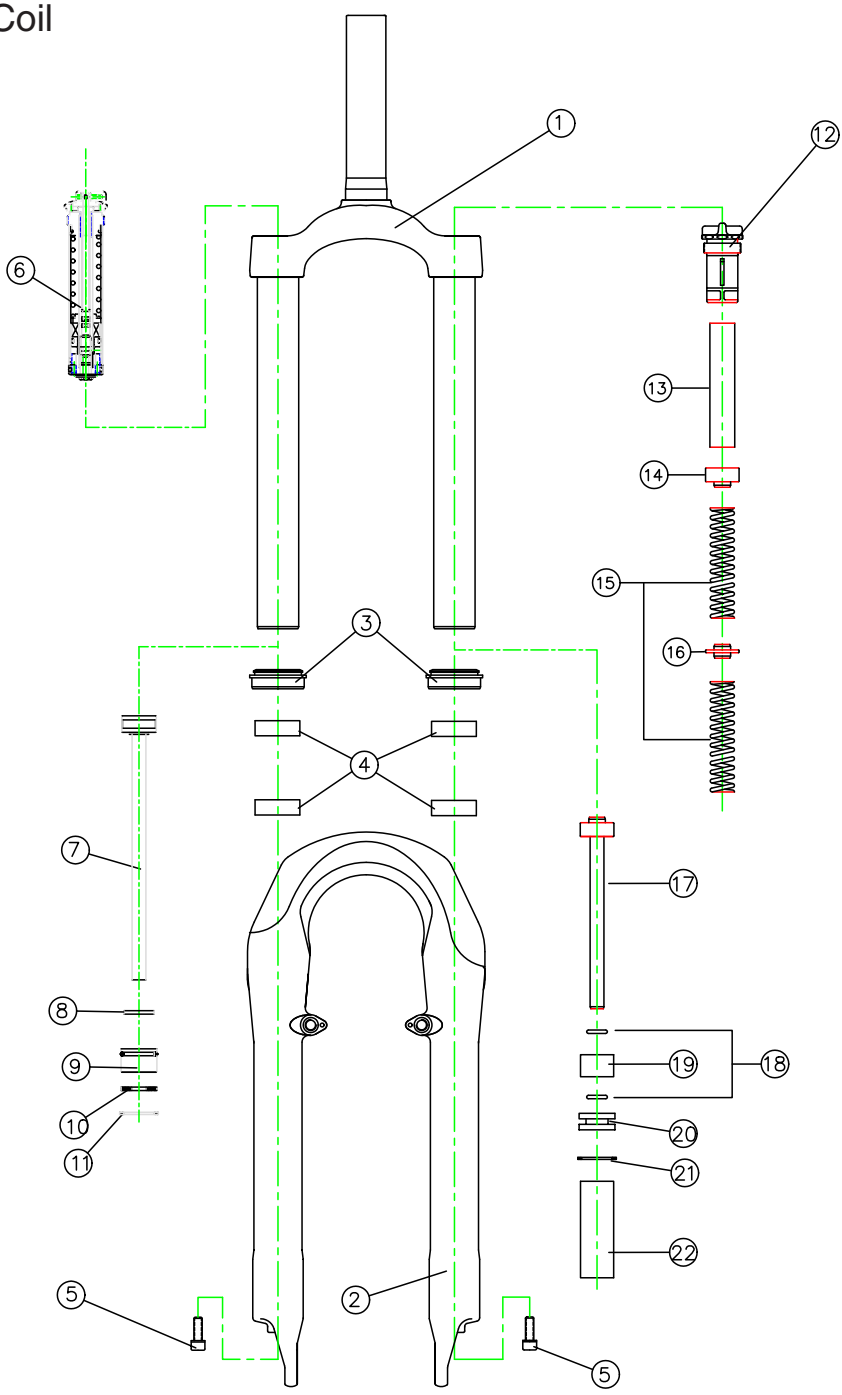
1) Remove the M6 bolt(5) from the lower leg assembly(2) on the air cartridge side.
2) Unscrew the valve cap(12).
3) Remove all air from cartridge by depressing the pin in center of schrader valve.
4) Using a 1-1/8" wrench, unthread the air cartridge fixing nut(13) and remove entire air cartridge assembly(14).

> **Warning! This is the extent of user serviceable parts.**
> **DO NOT try to further disassemble the air cartridge.**

5) Assembly is reversal of above steps.
6) Torque M6 bolts(5) at bottom of both legs to 120 in-lbs (13.5 Nm).

For cleaning the inside of the lower fork leg and outside of the stanchions, remove both M6 bolts(5) at the bottom of the fork legs and slide off lower legs. Torque M6 bolts to 120 in-lbs upon reinstallation.

Coil



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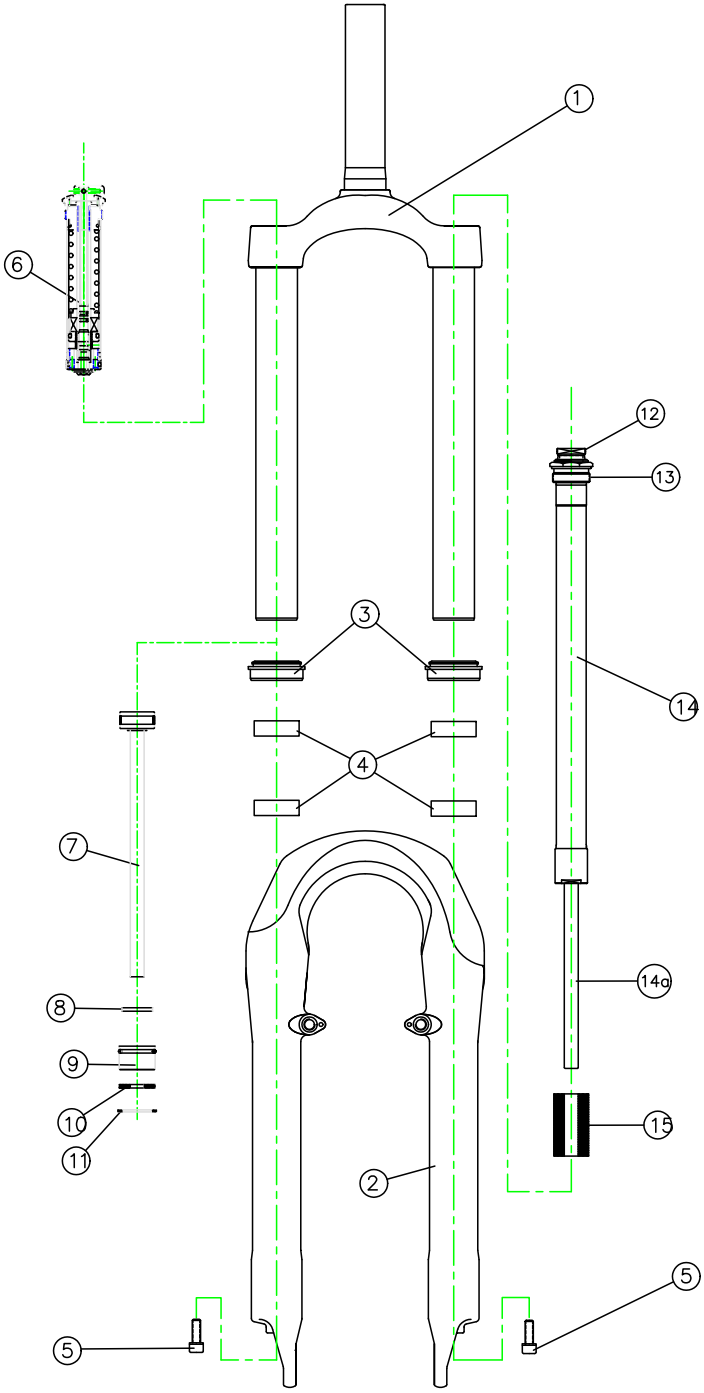
Coil Fork Parts List

1	Crown and Stanchion Assembly
2	Lower Leg Assembly
3	Dust Seals
4	Bushings
5	M6 Bolts
6	Damper/Lockout Cartridge
7	Damper Compression Rod
8	Rubber Washer
9	Damper Compression Rod/Oil Seal
10	Aluminum Washer
11	C-Clip
12	Preload Adjuster Knob/Top Cap
13	MCU
14	Plastic Cup Spacer
15	Coil Spring
16	Plastic Spring Spacer
17	Spring Compression Rod
18	O-Ring
19	Top Out Bumper
20	Spring Compression Rod Bushing
21	C-Clip
22	Bottom Out Bumper

Air



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Air Fork Parts List

1	Crown and Stanchion Assembly
2	Lower Leg Assembly
3	Dust Seals
4	Bushings
5	M6 Bolts
6	Damper/Lockout Cartridge
7	Damper Compression Rod
8	Rubber Washer
9	Damper Compression Rod/Oil Seal
10	Aluminum Washer
11	C-Clip
12	Valve Cap
13	Air Cartridge Fixing Cap
14	Air Cartridge
14a	Air Cartridge Inner Rod
15	Bottom Out Bumper

2004 Winwood Limited 2 Year Warranty

This product is warranted against defects in materials and workmanship only, for 2 years from the original date of retail purchase by the consumer, subject to the limitations detailed below. This warranty is expressly limited to the repair or replacement of the original product, at the option of Winwood, and is the sole remedy of this warranty. This limited warranty applies only to the original purchaser of this product and is not transferable. In no event shall Winwood be liable for loss, inconvenience or damage, wether direct, incidental or otherwise resulting from breach of any express or implied warranty or condition, of respect to this product except as set forth herein.

This warranty does not cover the following:

- Damage due to improper assembly or follow-up maintenance or lack of skill, competence or experience of user.
- Products that have been modified, neglected, used in competition or for commercial purposes, misused or abused, involved in accidents or anything other than normal use.
- Damage or deterioration to the surface finish, aesthetics or appearance of the product.
- Normal wear and tear.
- Labor required to remove and/or refit and re-adjust the product within the bicycle assembly.

This warranty gives the consumer specific legal rights, and those rights and other rights may vary from state to state.

We recommend that you have this product installed and maintained by a professional bicycle mechanic.

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