

2023-2024 DUAL SUSPENSION USER MANUAL

2023. NOVEMBER

GIANT

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INTRODUCTION

This booklet is intended as a quick-start reference guide to help familiarize you with your new GIANT full-suspension mountain bike. It is not meant to replace the general bicycle owner manual or the shock and suspension fork manufacturer's technical manuals that also came with your bicycle. If you do not receive these manuals, please contact your Authorized GIANT dealer. We encourage you to read all manuals relating to your bicycle and its suspension components before your first ride. All manuals contain important information regarding the safety and operation of your bicycle.

CAUTION

Please refer to the manufacturer's technical information that came with your bicycle for specific details regarding shock function and setup prior to riding your GIANT bicycle. If you did not receive these technical booklets, contact your Authorized GIANT dealer. If you do not understand the quick-start instructions or have difficulty with setup, please consult your Authorized GIANT dealer before riding your GIANT bicycle.

WARNING

Only GIANT Glory model bicycles are engineered for use with dual crown suspension forks. Use of dual crown suspension forks on any GIANT bicycle other than these models will void the warranty and may result in frame failure, which can cause injury or death. GIANT Bicycle Inc. is not responsible for damages to the bike and rider resulting from the use of dual crown forks.

BASIC TERMS & SHOCK SETUP OVERVIEW

TERMS

- **Bottom out:** When a suspension fork or a rear shock is compressed completely and all the suspension travel has been used
- **Compression stroke:** The motion of the shock in response to an impact.
- **Rebound:** The extension or return stroke of the shock.
- **Damping:** Internal mechanism to control the speed of compression or rebound.
- **PSI:** Pounds per square inch.
- **SAG:** Compression of the shock in relation to the rider's (with full gears) static weight.
- **Spring rate:** The amount of force required to compress the spring.
- **Top out:** When the shock or fork returns to its original stroke.

SETUP

Please refer to the individual shock manufacturer's technical manuals for specific information about adjusting the shock on your GIANT dual suspension bicycle.

The shock on your GIANT dual suspension bicycle can be adjusted to meet your riding style and weight. This booklet is intended as a quick-start guide to help you get started. It may take a few rides to find your preferred settings.

SAG

All GIANT dual suspension bikes rely on SAG for its suspension to work efficiently. Please take a few moments to read through this guide to understand SAG as it applies to your bicycle. Setting your bike's SAG will greatly enhance your riding experience and the performance of your bicycle.

REBOUND DAMPING

Rebound damping controls the rate of speed at which the shock returns to its original position after responding to certain impact force. Rebound damping prevents the shock from springing back too quickly. This is desirable because it improves the rear suspension's sensitivity to small bumps and the tire's ability to stay in contact with the ground. It also helps reduce the "pogo stick" motion which is not favored. Typically, the heavier the rider, the more rebound damping is required, as well as higher spring rate. Please refer to this guide for details on how to set rebound damping rate. You should also refer to the individual shock manufacturer's technical manual for specific information.

PEDAL PLATFORM

A pedal platform system is part of the compression damping circuit in the rear shock on your Maestro bike. The system helps to control pedaling induced compression on the suspension. Please refer to the shock manufacturer's technical manual for specific adjustment information.

NOTE

The linkage design of the Maestro Suspension system is inherently efficient, therefore very little or no pedal platform is required to get the best from your bike.

GENERAL MAINTENANCE

- Inspect all suspension bolts, if necessary, tighten them to required torque settings. If unsure, take your bicycle to your Authorized GIANT dealer immediately for inspection.
- Do not use high-pressure water sources to wash or rinse your bicycle. Doing so can displace any lubricants that are present, as well as possibly forcing water and/or contaminants into the bearings that can harm the pivot and bearing, therefore, reduce performance, and cause premature wear. Use only low pressure water, or a bucket of water with a sponge and a soft nylon bristle brush and mild soap to clean the frame and components. If using bicycle specific cleaners/degreasers please check the manufacturer's recommended amount of time to leave the cleaner on your bike. Prolonged exposure to some such cleaners may damage the surface finish of your frame and or components.

FRONT SUSPENSION SAG & REBOUND GUIDE

- To determine your bike's specific front suspension travel adjustments and recommended settings, please refer to the fork manufacturer's technical manual.
- A suspension fork is effective at both absorbing impact and helping the tire to stay on the ground for improved traction and braking control.
- Under riding condition, a fork will rely on SAG to keep the front tire in better contact with the ground during braking. The chart at page 7 should be used as a general guideline.

COIL SPRUNG FORK

- Spring rate on this type of forks is preset at the factory. Most have a simple preload adjuster that allows the rider to make the fork firmer or softer depending on rider's riding weight. The heavier the weight, the firmer the spring setting should be.
- If you are not achieving the recommended SAG at the lowest preload, then a softer spring is needed. On the other hand, if the maximum preload gives too much SAG, then a firmer spring is required.
- To check rebound, turn the rebound damping knob (if applicable) counter-clockwise until it stops. With full body weight, push down the fork forcefully with the front brake applied, let go the handle bar in a swift fashion, then observe how the fork rebounds. Turn the rebound damping knob clockwise a few clicks and test again. Keep adjusting until the wheel stays on the ground.

AIR SPRUNG FORK

- Generally you'll find a sticker on the fork leg regarding SAG information. It may be described as "SUGGESTED AIR PRESSURE"
- Modern air sprung fork may require the rider to cycle the fork a few times between each setup attempts to balance the air chambers.
- Use the factory suggested information as a starting point. Test the SAG by standing on the bike with a neutral position. And use the SAG indicator on the fork stanchion to measure current SAG. Depending on the bike category, a SAG between 15%~30% is commonly preferred. As a general guideline, the longer the travel is, the more SAG is required.

SUSPENSION FORK SAG RECOMMENDATION CHART

FORK TRAVEL (mm)	SAG (mm)
100	15-25
120	18-30
130	26-39
140	28-42
160	32-48
180	36-54
200	40-60

Rebound Setting

- To check rebound, turn the rebound damping knob (if applicable) counter-clockwise until it stops. With full body weight, push down the fork forcefully with the front brake applied, and observe how the fork rebounds. Turn the rebound damping knob clockwise a few clicks and test again. Keep adjusting until the wheel stays on the ground after the fork has returned to its full travel. As a general rule, the heavier the rider, the more damping will be required.

REAR SHOCK SETUP GUIDE

COIL SHOCK SETUP

GIANT's Maestro rear suspension design precisely positions the pivots and linkages to give you efficient pedaling and small bump compliance. Maestro's pivot placement allows the rear suspension to be completely active under pedaling and braking, allowing the rear wheel to react constantly to the terrain variations.

- All coil shock-equipped GIANT bicycles use the same procedure to determine "SAG" and "rebound damping".



Please refer to the manufacturer's technical information for specific details regarding shock features and setup prior to riding your GIANT bicycle. If you have difficulty with the setup, please consult your Authorized GIANT Dealer.

- Maestro technology, relies on proper SAG setting on rear shock to yield its full potential. SAG setting is relative to the individual rider's weight. See the appendix SAG setting instructions for details.
- GIANT's Glory DH and Glory frame designs and suspension travel are intended for both aggressive freeriding and recreational/competitive downhill riding. The SAG range can accommodate a wide variety of riding styles and terrain.
- The GIANT Reign is an all-mountain bicycle designed to handle both aggressive trail riding and light freeriding duties. The multi-tunable shock can be almost infinitely adjusted for all types of terrain and riding styles.

COIL SHOCKS SETTING & ADJUSTING SAG

1. Turn the spring tension collar counter clockwise until there is minimal tension on the spring (Fig.1).
2. With a felt-tip marker, place a dot on the edge of the collar and the shock body so you can measure full rotations of the shock collar.
3. With a partner aside holding the bike upright, set yourself onto a neutral position with both feet on the pedals and place them horizontally. Cycle the shock a few times and hold still. Measure the eye-to-eye distance (Fig.1).
4. Dismount and subtract the weighted eye-to-eye distance from the un-weighted eye-to-eye distance to determine SAG. See SAG Recommendations charts for SAG distances.
5. Turn the shock's tension collar clockwise to increase spring tension/decrease shock SAG.
6. If you sit on the bike with minimal tension on the spring and there is less than preferred SAG to be measured, a spring with lighter rate is needed. If you turn the shock tension collar 3 complete turns and the shock compresses more than preferred SAG amount, a heavier spring is needed. Consult your Authorized Giant Retailer for replacement springs.

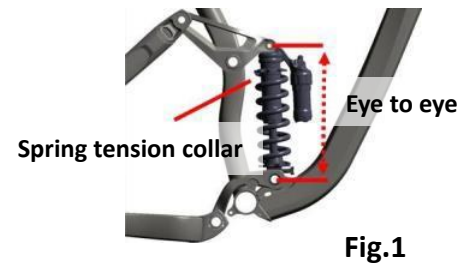


Fig.1



Never tighten the spring tension collar past 3 turns from minimum tension as doing so will cause the spring to "coil bind" which can cause damage to the spring and internal workings of the shock.

AIR SHOCK SETUP

GIANT cross-country, trail and all mountain bikes feature an air shock equipped Maestro suspension design. Maestro-equipped mountain bikes rely on rear suspension SAG to yield its full potential. Setting up SAG is a critical step and is relative to the individual rider's riding weight. In here, riding weight means the total amount of weight from the rider and all gears equipped, e.g. helmet, backpack, cycling shoes, etc.

USING A SHOCK PUMP

These simple steps will help you get the most accurate use of your shock pump.

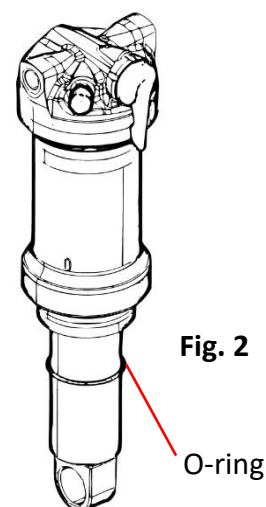
1. When screwing the pump connector onto the shock, do not overtighten. A bit more than finger tight is good enough.
2. Watch the pressure gauge on the pump when you screw the pump onto the shock. Screw the pump on until the gauge registers a pressure and then another 1/4 - 1/2 turn. At this point you now have a proper air seal.
3. When you remove the pump, a light hissing is heard. This is perfectly normal and the lost air is actually from the pump connections. The pump head is specially designed so it closes the valve core before it's removed from the valve stem. The shock remains the same pressure as the pump gauge shows.
4. Each time a reconnection is made. As the pressurized air in the shock will fill up the pump connection, the reading on the gauge is therefore slightly lower than actual shock pressure. This is perfectly normal and is not implying the shock is leaking.

AIR SHOCKS SETTING AND ADJUSTING SAG

1. Before setting up the SAG, set the rebound to fastest and compression to open position. Rebound adjuster is usually a red knob whereas the compression adjuster is a blue lever. Turn them counter-clockwise until it bottoms out.
2. If your bike comes with a specific manual, or there's a dedicated setting information on your fork or shock, they should provide a good suggestion chart for base setting. Pump the main air chamber according to the suggestion in the manual.

If you don't have a manual handy, try pump to a psi equal to 100% of riding weight in pounds (2.2lb = 1kg). This can be a rough starting point.

3. Most modern air shocks utilize a self-balancing design which require you to cycle the shock a few times during the setup procedure. To



achieve this, simply apply pressure on the saddle and compress the shock a few times, you may notice the pressure drops a bit, this is perfectly normal. Pump a few more until you reach the target pressure.

4. Position your bicycle next to a wall so that you can sit on the bike with both feet on the pedals while steadying yourself with one arm.
With all your gears on, get on the bike and compress both front fork and rear shock a few times to break the stiction. Stay at a neutral position where you're in the center of cockpit and not sitting on the saddle.
5. Push the rubber O-ring that is around the shock shaft all the way against the base of shaft (closest to shock body).
6. Dismount gently without bouncing and take note of how far the O-ring has moved down the shaft. Measure distance O-ring has moved (Fig. 2). This is your current SAG
7. Add or remove air by 5~10 PSI each time, and repeat step 3~6 until desired shock SAG is obtained. The shock pump must be removed every time you check the SAG.



- Please refer to the shock manufacturer's technical manual for minimum and maximum working pressures for your shock. Refer to the SAG Recommendation Guide on the next page for proper SAG measurement.
- If there is no O-ring on the shock body or you cannot clearly see the shock shaft then please use the method for coil spring bikes using the eye to eye measurement as described on page 9.

COIL & AIR SHOCKS SETTING & ADJUSTING REBOUND DAMPING

(See Basic Terms and Shock Setup Overview for definition of rebound damping).

1. If you are unfamiliar with rebound damping, perform this procedure: With full body weight, push down on the saddle forcefully to compress the shock. Watch (and feel) how the shock rebounds from compression.
2. Next, turn the rebound damping knob clockwise until it stops and compress the shock under full body weight. Note that the shock rebounds very slowly. Next, turn the damping knob counterclockwise a few complete turns and re-perform your compression testing until the shock rebounds more slowly than with no damping.
3. To check the rebound damping rate while riding, ride off a curb while seated.

The rear suspension should bounce only once upon rebound (the heavier the rider, the more damping will be required). Adjust accordingly to accomplish this motion. If the suspension bounces more than once, turn the damping knob clockwise until one bounce is achieved.

SUGGESTED REAR SUSPENSION SAG GUIDE

MY24 bike models

Units in mm unless otherwise indicated.

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Stroke	Shock Mount	Hardware*	Rec. SAG %	SAG Measured By Travel
Glory	200	225	75	Trunnion	54x M10	30%	22.5
Reign SX	165	205	65	Trunnion	54x M10	30%	19.5
Reign	160	205	62.5	Trunnion	54x M10	30%	18.75
Trance 29	120	185	50	Trunnion	54x M10	30%	15
Stance	125	190	45	Standard Metric	22.2x Ø6	30%	13.5
Anthem	100	165	45	Trunnion	54x M10	25%	11.25
Reign E+	160	205	62.5	Trunnion	54x M10	30%	18.75
Trance X E+	140	185	52.5	Trunnion	54x M10	30%	15.75
Stance E+	125	190	45	Standard Metric	22.2x Ø6	30%	13.5
Intrigue LT range	150	185	55	Trunnion	54x M10	30%	16.5
Intrigue X range	140	185	52.5	Trunnion	54x M10	30%	15.75
Intrigue 29 range	125	185	50	Trunnion	54x M10	30%	15
Embolden range	120	184	44	Standard Metric	22.2x Ø6	30%	13.2
Pique Adv 29 range	115	165	45	Trunnion	54x M10	25%	11.3

*No bushing is required

MY23 bike models

Units in mm unless otherwise indicated.

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Stroke	Shock Mount	Hardware*	Rec. SAG %	SAG Measured By Travel
Glory	200	225	75	Trunnion	54x M10	30%	22.5
Reign SX	165	205	65	Trunnion	54x M10	30%	19.5
Reign	160	205	62.5	Trunnion	54x M10	30%	18.75
Trance X 29	135	185	55	Trunnion	54x M10	30%	16.5
Trance X	145	185	55	Trunnion	54x M10	30%	16.5
Trance 29	120	185	50	Trunnion	54x M10	30%	15
Stance	120	184.15	44.45	Standard Imperial	22.2x Ø6	25%	11
Anthem	100	165	45	Trunnion	54x M10	25%	11.25
Reign E+	160	205	62,5	Trunnion	54x M10	30%	18.75
Trance X E+	140	185	52.5	Trunnion	54x M10	30%	15.75
Stance E+	125	190	45	Standard Metric	22.2x Ø6	30%	13.5
Intrigue LT range	150	185	55	Trunnion	54x M10	30%	16.5
Intrigue 29 range	125	185	50	Trunnion	54x M10	30%	15
Embolden range	120	184	44	Standard Metric	22.2x Ø6	30%	13.2
Pique 29 range	100	165	45	Trunnion	54x M10	25%	11.3

*No bushing is required

MY22 bike models

Units in mm unless otherwise indicated

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Stroke	Shock Mount	Hardware*	Rec. SAG %	SAG Measured By Travel
Reign Reign SX	146	205	60	Trunnion	54x M10	30%	18
Trance X 29	135	185	55	Trunnion	54x M10	30%	16.5
Trance X	145	185	55	Trunnion	54x M10	30%	16.5
Trance 29	120	185	50	Trunnion	54x M10	30%	15
Stance	120	184.15	44.45	Standard Imperial	22.2x Ø6	25%	11
Anthem	100	165	45	Trunnion	54x M10	25%	11.25
Reign E+	160	205	62.5	Trunnion	54x M10	30%	18.75
Trance X E+	140	185	52.5	Trunnion	54x M10	30%	15.75
Stance E+	120	184.15	44.45	Standard Imperial	22.2x Ø6	25%	11
Intrigue	140	185	52.5	Trunnion	54x M10	30%	15.8
Intrigue 29 range	125	185	50	Trunnion	54x M10	30%	15
Embolden range	120	184	44	Standard Metric	22.2x Ø6	30%	13.2
Pique 29 range	100	165	45	Trunnion	54x M10	25%	11.3

*No bushing is required

MY21 bike models

Units in mm unless otherwise indicated.

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Travel	Shock Mount	Hardware*	Rec. SAG %	SAG Measured By Travel
Anthem 29	90	165	42.5	Trunnion	54x 10	20-25%	8.5-10.6
Embolden	120	184.15	44.45	Standard Imperial	22.2x 6	25%	11
Intrigue 29	125	185	50	Trunnion	54x 10	25%	12.5
Intrigue	140	185	52.5	Trunnion	54x 10	30%	15.8
Pique 29	100	165	45	Trunnion	54x 10	20-25%	9-11.2
Reign 29	146	205	60	Trunnion	54x 10	30-35%	18-21
Reign	160	205	62.5	Trunnion	54x 10	30-35%	18.8-21.9
Stance 29	120	184.15	44.45	Standard Imperial	22.2x 6	25%	11
Stance	120	184.15	44.45	Standard Imperial	22.2x 6	25%	11
Trance 29	115	165	42.5	Trunnion	54x 10	25%	10.6
Trance Jr	120	165	42.5	Trunnion	54x 10	25%	10.6-12.8
Trance	140	185	52.5	Trunnion	54x 10	30%	15.8
Trance X 29	135	185	55	Trunnion	54x 10	25%	13.8

*No bushing is required

MY20 bike models

Units in mm unless otherwise indicated.

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Travel	Shock Mount	Hardware*	Recommend SAG %	SAG Measured By Travel
Anthem 29	90	165	42.5	Trunnion	54x 10	20-25%	8.5-10.6
Pique 29	100	165	45	Trunnion	54x 10	20-25%	9-11.2
Stance	120	184.15	44.45	Standard Imperial	22.2x 6	25%	11
Embolden	120	184.15	44.45	Standard Imperial	22.2x 6	25%	11
Stance 29	120	184.15	44.45	Standard Imperial	22.2x 6	25%	11
Trance 29	115	165	42.5	Trunnion	54x 10	25%	10.6
Trance Jr	120	165	42.5	Trunnion	54x 10	25%	10.6-12.8
Trance	140	185	52.5	Trunnion	54x 10	30%	15.8
Intrigue	140	185	52.5	Trunnion	54x 10	30%	15.8
Reign	160	205	62.5	Trunnion	54x 10	30-35%	18.8-21.9
Hail	160	205	62.5	Trunnion	54x 10	30-35%	18.8-21.9
Reign 29	146	205	60	Trunnion	54x 10	30-35%	18-21
Glory	200	240	76	Standard Imperial	40x 8	30-35%	22.8-26.6

*No bushing is required