2022
DUAL SUSPENSION
USER MANUAL

2021. DECEMBER

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 rear shock or suspension fork (hereafter referred as “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 8 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 weight. The heavier the rider, 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, 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. As a general rule, the heavier the rider, the more damping will be required.

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 10%~35% is commonly preferred. As a general guideline, the longer the travel is, the more sag is required.

SUSPENSION SAG RECOMMENDATION CHART

FORK TRAVEL (mm)	SAG (mm)
80	12-16
100	20-25
120	24-30
130	26-33
140	35-42
160	48-56
180	54-63
200	60-70

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

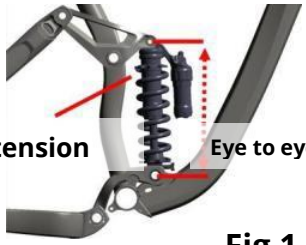

Fig.1

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.

CAUTION

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. Sag is a critical setup and is relative to the individual rider's weight.

USING A SHOCK PUMP

These simple steps will help you get the most accurate use of your shock pump and improve the life 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. Pump the main air chamber to a psi equal to 100% of rider weight in pounds (2.2lb = 1kg). This is rough starting point.
2. Push the rubber O-ring that is around the shock shaft all the way against the base of shaft (closest to shock body).
3. 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. Gently sit on the saddle without bouncing. 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

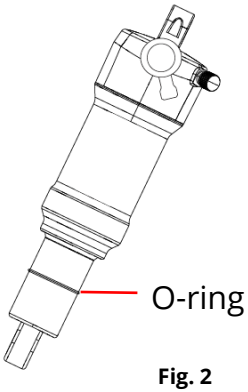

Fig. 2

4. Add or remove air until desired shock sag is obtained. To achieve a high level of accuracy it's best to carry out this procedure while wearing normal riding kit including shoes, hydration pack, any tools, etc. The shock pump must be removed every time you check the sag.

⚠CAUTION

- 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 10.

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

MY22 bike models

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Stroke	Shock Mounting Type	Hardware	Recommend Sag %	Sag Measured By Travel
Glory	200mm	240mm	76mm	Standard/Inch	40xΦ8/No Bushing	30-35%	22.8-26.6 mm
Trance Jr	120mm	165mm	42.5mm	Trunnion /Metric	54x M10/No Bushing	25%	10.6-12.8 mm
Trance	140mm	185mm	52.5mm	Trunnion /Metric	54x M10/No Bushing	30%	15.8 mm
Hail	160mm	205mm	62.5mm	Trunnion /Metric	54x M10/No Bushing	30-35%	18.8-21.9 mm
Anthem 29	90mm	165mm	42.5mm	Trunnion /Metric	54x M10/No Bushing	20-25%	8.5-10.6 mm
Reign	160mm	205mm	62.5mm	Trunnion /Metric	54x M10/No Bushing	30-35%	18.8-21.9 mm
Stance	120mm	184.15mm	44.45mm	Standard/Inch	22.2xΦ6/No Bushing	25%	11 mm

Embolden	120mm	184.15mm	44.45mm	Standard/Inch	22.2xΦ6/No Bushing	25%	11 mm
Trance 29	115mm	165mm	42.5mm	Trunnion /Metric	54x M10/No Bushing	25%	10.6 mm
Intrigue	140mm	185mm	52.5mm	Trunnion /Metric	54x M10/No Bushing	30%	15.8 mm
Pique 29	100mm	165mm	45mm	Trunnion /Metric	54x M10/No Bushing	20-25%	9-11.2 mm
Stance 29	120mm	184.15mm	44.45mm	Standard/Inch	22.2xΦ6/No Bushing	25%	11 mm
Reign 29	146mm	205mm	60mm	Trunnion /Metric	54x M10/No Bushing	30-35%	18-21mm
Trance X 29	135mm	185mm	55mm	Trunnion /Metric	54x M10/No Bushing	25%	13.8 mm
Intrigue 29	125mm	185mm	50mm	Trunnion /Metric	54x M10/No Bushing	25%	12.5 mm

MY22 Anthem ADV PRO 29	100mm	165mm	45mm	Trunnion /Metric	54x M10/No Bushing	20-25%	9-11.2 mm
MY22 Embolden 29	120mm	184.15mm	44.45mm	Standard/Inch	22.2xΦ6/No Bushing	25%	11 mm
MY22 Trance 29	120mm	185mm	50mm	Trunnion /Metric	54x M10/No Bushing	25%	12.5 mm
MY22 Trance X	145mm	185mm	55mm	Trunnion /Metric	54x M10/No Bushing	30%	16.5 mm

MY21 bike models

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Travel	Shock Mounting Type	Hardware	Recommend Sag %	Sag Measured By Travel
Anthem 29 Series	90 mm	165 mm	42.5 mm	Trunnion /Metric	54x10/No Bushing	20-25%	8.5-10.6 mm
Embolden Series	120 mm	184.15 mm	44.45 mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm
Intrigue 29 Series	125 mm	185 mm	50 mm	Trunnion /Metric	54x10/No Bushing	25%	12.5 mm
Intrigue Series	140 mm	185 mm	52.5 mm	Trunnion /Metric	54x10/No Bushing	30%	15.8 mm
Pique 29series	100 mm	165 mm	45 mm	Trunnion /Metric	54x10/No Bushing	20-25%	9-11.2 mm
Reign 29 Series	146 mm	205 mm	60 mm	Trunnion /Metric	54x10/No Bushing	30-35%	18-21mm
Reign Series	160 mm	205 mm	62.5 mm	Trunnion /Metric	54x10/No Bushing	30-35%	18.8-21.9 mm
Stance 29 Series	120 mm	184.15 mm	44.45 mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm
Stance Series	120 mm	184.15 mm	44.45 mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm

Trance 29 Series	115 mm	165 mm	42.5 mm	Trunnion /Metric	54x10/No Bushing	25%	10.6 mm
Trance Jr Series	120 mm	165 mm	42.5 mm	Trunnion /Metric	54x10/No Bushing	25%	10.6-12.8 mm
Trance Series	140 mm	185 mm	52.5 mm	Trunnion /Metric	54x10/No Bushing	30%	15.8 mm
Trance X 29 series	135 mm	185 mm	55 mm	Trunnion /Metric	54x10/No Bushing	25%	13.8 mm

MY20 bike models

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Travel	Shock Mounting Type	Hardware	Recommend Sag %	Sag Measured By Travel
Anthem 29 Series	90.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	20-25%	8.5-10.6 mm
Pique 29series	100.mm	165 mm	45.mm	Trunnion /Metric	54x10/No Bushing	20-25%	9-11.2 mm
Stance Series	120.mm	184.15 mm	44.45mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm
Embolden Series	120.mm	184.15 mm	44.45mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm
Stance 29 Series	120.mm	184.15 mm	44.45mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm
Trance 29 Series	115.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	25%	10.6 mm
Trance Jr Series	120.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	25%	10.6-12.8 mm
Trance Series	140.mm	185 mm	52.5mm	Trunnion /Metric	54x10/No Bushing	30%	15.8 mm
Intrigue Series	140.mm	185 mm	52.5mm	Trunnion /Metric	54x10/No Bushing	30%	15.8 mm
Reign Series	160.mm	205 mm	62.5mm	Trunnion /Metric	54x10/No Bushing	30-35%	18.8-21.9 mm

Hail Series	160.mm	205mm	62.5mm	Trunnion /Metric	54x10/No Bushing	30-35%	18.8-21.9 mm
Reign 29 Series	146.mm	205 mm	60.mm	Trunnion /Metric	54x10/No Bushing	30-35%	18-21mm
Glory Series	200.mm	240 mm	76.mm	Standard/Inch	40x8/No Bushing	30-35%	22.8-26.6 mm

MY19 bike models

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Travel	Shock Mounting Type	Hardware	Recommend Sag %	Sag Measured By Travel
Anthem 29 Series	90.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	20-25%	8.5-10.6 mm
Anthem Series	110.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	20-30 %	8.5-12.8 mm
Stance Series	120.mm	184.15 mm	44.5mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm
Embolden Series	120.mm	184.15 mm	44.45mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm
Pique Series	120.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	25-30 %	10.6-12.8 mm
Trance 29 Series	115.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	25%	10.6 mm
Trance Jr Series	120.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	25%	10.6-12.8 mm
Trance Series	140.mm	185 mm	52.5mm	Trunnion /Metric	54x10/No Bushing	30%	15.8 mm
Intrigue Series	140.mm	185 mm	52.5mm	Trunnion /Metric	54x10/No Bushing	30%	15.8 mm
Reign Series	160.mm	205 mm	62.5mm	Trunnion /Metric	54x10/No Bushing	30-35%	18.8-21.9 mm

Hail Series	160.mm	205mm	62.5mm	Trunnion /Metric	54x10/No Bushing	30-35%	18.8-21.9 mm
Glory Series	200.mm	240 mm	76.mm	Standard/Inch	40x8/No Bushing	30-35%	22.8-26.6 mm

MY18 bike models

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Travel	Shock Mounting Type	Hardware	Recommend Sag %	Sag Measured By Travel
Anthem 29 series	90.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	20-25%	8.5-10.6 mm
Anthem series	110.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	20-30 %	8.5-12.8 mm
Stance series	120.mm	184.15 mm	44.5mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm
Embolden series	120.mm	184.15 mm	44.45mm	Standard/Inch	22.2x6/No Bushing	25%	11 mm
Pique series	120.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	25-30 %	10.6-12.8 mm
Trance Jr series	120.mm	165 mm	42.5mm	Trunnion /Metric	54x10/No Bushing	25%	10.6-12.8 mm
Trance series	140.mm	185 mm	52.5mm	Trunnion /Metric	54x10/No Bushing	30%	15.8 mm

Reign series	160.mm	205 mm	62.5mm	Trunnion /Metric	54x10/No Bushing	30-35%	18.8-21.9 mm
Hail series	160.mm	205mm	62.5mm	Trunnion /Metric	54x10/No Bushing	30-35%	18.8-21.9 mm
Glory series	200.mm	240 mm	76.mm	Standard/Inch	40x8/No Bushing	30-35%	22.8-26.6 mm

MY17 bike models

Bicycle Model	Rear Wheel Travel	Eye To Eye Shock Length	Shock Travel	Shock Mounting Type	Hardware	Recommend Sag %	Sag Measured By Travel
Anthem 29 series	100 mm	165 mm	38 mm	Standard	22.2x6/No Bushing	20-25%	7.6-9.5 mm
Anthem series	110 mm	165 mm	42.5 mm	Trunnion /Metric	54x10/No Bushing	20-30%	8.5-12.8 mm
Stance series	120 mm	184.15 mm	44.45 mm	Standard	22.2x6/No Bushing	25%	11 mm
Embolden series	120 mm	184.15 mm	44.45 mm	Standard	22.2x6/No Bushing	25%	11 mm
Pique series	120 mm	165 mm	42.5 mm	Trunnion /Metric	54x10/No Bushing	25-30%	10.6-12.8 mm
Trance series	140 mm	185 mm	52.5 mm	Trunnion /Metric	54x10/No Bushing	30%	15.8 mm
Reign series	160 mm	200 mm	57.15 mm	Standard	40x8/No Bushing	30-35%	17.1- 20 mm
Hail series	160 mm	205 mm	62.5 mm	Trunnion /Metric	54x10/No Bushing	30-35%	18.8-21.9 mm

Glory series	200 mm	240 mm	76 mm	Standard	40x8/No Bushing	30-35%	22.8-26.6 mm