



2010 SUSPENSION MANUAL

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INTRODUCTION

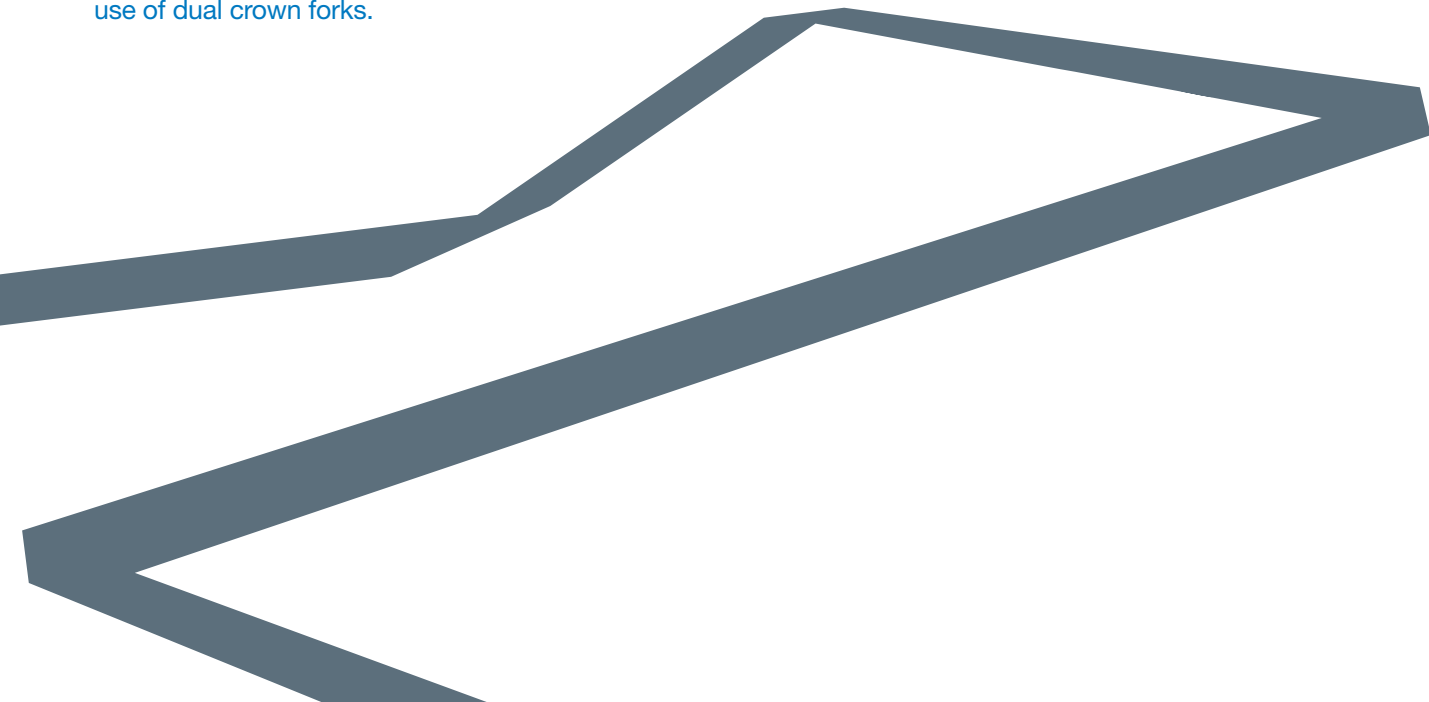
This booklet is intended as a quick-start reference guide to help familiarize you with the suspension settings of Maestro Suspension-equipped mountain bikes. It is not meant to replace the general bicycle owner's manual or the shock and suspension fork manufacturer's technical manuals that also shipped with the bicycle.

CAUTION

Please encourage your consumer to refer to the manufacturer's technical information that came with the bicycle for specific details regarding shock function and setup prior to riding.

WARNING

Only Giant Glory and Faith 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 Canada, Inc. is not responsible for damages to the bike and rider resulting from the use of dual crown forks.



BASIC TERMS & SHOCK SET-UP OVERVIEW

TERMS

Bottomed Out: When a rear shock or suspension fork (herein after referred to 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

Damping: Internal mechanism to control the speed of compression or rebound

PSI: Pounds per square inch

Rebound: The extension or return stroke of the shock

Sag: Compression of the shock caused by the rider’s static weight

Spring Rate: The amount of force required to compress the spring

Topped Out: When the shock or fork rebounds quickly enough to cause a “clunk” at the very top of its upstroke

SETUP

The shock on a Giant dual suspension bicycle can be adjusted to meet the riding style and weight of the consumer. This booklet is intended as a quick-start guide to get the consumer started. Please refer to the specific shock manufacturer’s technical manuals for more information on how to adjust the shock equipped on the Giant dual suspension bicycle.

SAG

The shock on a Giant dual suspension bicycle can be adjusted to meet the riding style and weight of the consumer. This booklet is intended as a quick-start guide to get the consumer started. Please refer to the specific shock manufacturer’s technical manuals for more information on how to adjust the shock equipped on the Giant dual suspension bicycle.

REBOUND DAMPING

Rebound damping controls the rate of speed at which the shock returns to its original position after responding to a bump 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 from the rear suspension when the bike encounters a bump while the rider is seated. Typically, the heavier the rider (and higher the necessary spring rate), the more rebound damping is required. 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 a Maestro bike. The system helps to control pedal induced “bob” 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 for your consumer’s bike.



COIL SHOCK SETUP*

*Applicable to the following bikes/ framesets:

GLORY	(8.0" REAR WHEEL TRAVEL)
FAITH	(7.0" REAR WHEEL TRAVEL)
REIGN X	(6.75" REAR WHEEL TRAVEL) TERMS

SUSPENSION SETTINGS AND RECOMMENDATIONS (COIL SHOCK-EQUIPPED BIKES)

Giant's Maestro rear suspension design precisely positions the pivots and linkages to provide 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.

All coil shock-equipped Giant bicycles use the same formula to determine "sag" and "rebound damping" (see Basic Terms & Shock Setup Overview for definition of sag and rebound damping).

WARNING

Maestro-equipped mountain bikes rely on rear suspension "sag." Sag is a critical performance component and is relative to the individual rider's weight. See the following sag setting instructions (Page iv) for details.

Giant's Glory frame design is intended for aggressive freeriding and recreational/competitive downhill riding. The sag range can accommodate a wide variety of riding styles and terrain.

The Giant Reign X 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.

SETTING AND ADJUSTING SAG (COIL SHOCKS)

1. Turn the spring tension collar counter clockwise until there is minimal tension on the spring (figure1).
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. Position the bicycle next to a wall so that the rider can sit on the bike with both feet on the pedals while steadying themselves with one arm. Have them gently sit on the saddle without bouncing. Measure the eye-to-eye distance while they're seated on the bike (Figure 1). Get the rider to dismount.
4. Subtract the weighted eye-to-eye distance from the un-weighted eye-to-eye distance to determine sag. See the Sag Recommendations Chart for sag distances.

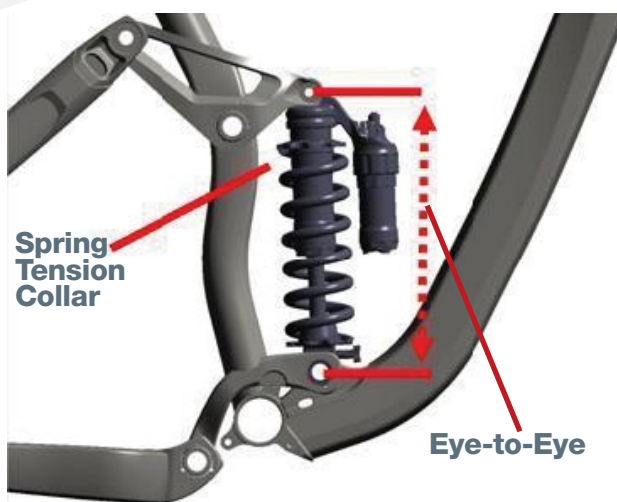


Fig. 1: (Model: Faith)

SETTING AND ADJUSTING SAG (COIL SHOCKS) CONT'D

5. For general purpose riding, the shock should compress approximately one quarter of its travel (please refer to the Sag Recommendations charts for specific recommendations for the frame). Turn the shock's tension collar clockwise to increase spring tension/decrease shock sag.

6. If the rider sits on the bike with minimal tension on the spring and there is less than one quarter of the shock travel, a lighter weight spring is needed. If you turn the shock tension collar three complete turns and the shock compresses more than a quarter of the shock's travel, a heavier spring is needed. Contact your Giant Canada Inside Sales Representative for replacement springs.

WARNING

Never tighten the spring tension collar past three 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.



SAG RECOMMENDATIONS CHART (COIL SHOCK)

	WHEEL TRAVEL	EYE-TO-EYE TRAVEL	SHOCK TAVEL	RECOMMENDED SAG	SAG MEASURED BY SHOCK TRAVEL
GLORY	8" (203.2mm)	8.75" (222.3mm)	2.75" (69.9mm)	25-35%	0.69"-0.96" (18-25mm)
FAITH	7" (177.8mm)	8.5" (215.9mm)	2.5" (63.5mm)	25-35%	0.63"-0.88" (16-22.4mm)
REIGN X	6.75" (171.0mm)	7.87" (200.0mm)	2.25" (57mm)	25-30%	0.56"-0.68" (14-17mm)



AIR SHOCK SETUP*

*Applicable to the following bikes/ framesets:

REIGN X (AIR)	(6.75" REAR WHEEL TRAVEL)
REIGN	(6.0" REAR WHEEL TRAVEL)
TRANCE X ADVANCED SL	(5.0" REAR WHEEL TRAVEL)
TRANCE X	(5.0" REAR WHEEL TRAVEL)
CYPHER	(5.0" REAR WHEEL TRAVEL)
ANTHEM X ADVANCED SL	(4.0" REAR WHEEL TRAVEL)
ANTHEM X	(4.0" REAR WHEEL TRAVEL)
ANTHEM X W	(4.0" REAR WHEEL TRAVEL)
YUKON FX	(4.0" REAR WHEEL TRAVEL)

SUSPENSION SETTINGS AND RECOMMENDATIONS (AIR SHOCK-EQUIPPED BIKES)

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." Sag (see Basic Terms & Shock Setup Overview) is a critical performance component and is relative to the individual rider's weight.

USING A SHOCK PUMP

These simple steps will help your consumer get the most accurate use and longevity of their shock pump.

1. When screwing the pump onto the shock do not screw it on all the way until it stops. This will damage the seal on the pump and also allow too much air to escape when you remove the pump.
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 strong air seal.
3. When you remove the pump a small amount of air will always be lost. If you follow our recommendation above the pressure loss will only be approximately 5% rather than up to 50% if the pump is screwed all the way onto the valve. Because of this pressure loss when you have found a pressure that gives you the best performance from your frame you will need to add 5% extra pressure according to the gauge to leave the required pressure in the shock once the pump is removed.



EXAMPLE: if the required pressure is 160psi, 5% = 8psi.

Pump the shock until the gauge reads 168psi, remove the pump; 160psi will be left in the shock.

SETTING AND ADJUSTING SAG (AIR SHOCKS) CONT'D

1. Pump the main air chamber to a psi equal to 100% of rider weight in pounds (2.2lb = 1kg).
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 the bicycle next to a wall so that they can sit on the bike with both feet on the pedals while steadying themselves with one arm. Have them gently sit on the saddle without bouncing. Get them to dismount gently without bouncing and take note of how far the O-ring has moved down the shaft. Measure the distance the O-ring has moved (Figure 2).
4. Add or remove air until desired shock movement is obtained. To achieve a high level of accuracy it's best to carry out this procedure while the rider is wearing a normal riding kit including shoes, hydration pack, any tools, etc. The shock pump must be removed every time you check the sag.

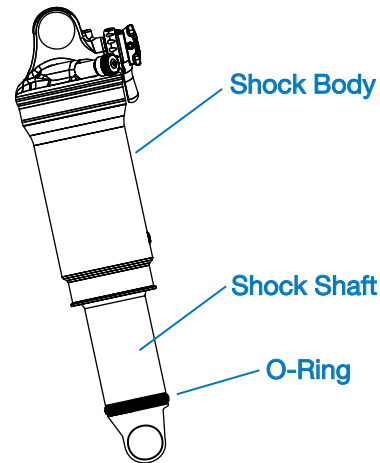


Figure 2 (Air Shock)

NOTES

Please refer to the shock manufacturer's technical manual for minimum and maximum working pressures for the 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 sprung bikes using the eye-to-eye measurement as described on Page iii of this manual.

SAG RECOMMENDATIONS CHART (AIR SHOCKS)

	Wheel travel	Eye to eye shock lengths	Recommend sag %	S hock travel	Sag measured by shock travel
REIGN X	6.75" (171mm)	7.875"(200mm)	25%—30%	2.25" (57mm)	0.56—0.68" (14mm —17mm)
REIGN	6.00" (152mm)	7.875"(200mm)	25%—30%	2.00" (51mm)	0.50" —0.60" (13mm —15mm)
TRANCE X Advanced SL	5.00" (127mm)	7.25"(184.1mm)	25%—30%	1.75"(44mm)	0.44" —0.53"(11mm —13mm)
TRANCE X	5.00" (127mm)	7.25"(184.1mm)	25%—30%	1.75"(44mm)	0.44" —0.53"(11mm —13mm)
CYPHER	5.00" (127mm)	7.25"(184.1mm)	25%—30%	1.75"(44mm)	0.44" —0.53"(11mm —13mm)
ANTHEM X Advanced SL	4.00" (101mm)	6.5"(165mm)	20%—30%	1.50" (38mm)	0.30" —0.45" (8mm —11mm)
ANTHEM X	4.00" (101mm)	6.5"(165mm)	20%—30%	1.50" (38mm)	0.30" —0.45" (8mm —11mm)
ANTHEM X W	4.00" (101mm)	6.5"(165mm)	20%—30%	1.50" (38mm)	0.30" —0.45" (8mm —11mm)
YUKON FX	4.00" (101mm)	6.5"(165mm)	20%—30%	1.50" (38mm)	0.30" —0.45" (8mm —11mm)



SETTING AND ADJUSTING REBOUND DAMPING (BOTH COIL AND AIR SHOCKS)

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, have the rider 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.

FRONT SUSPENSION TRAVEL & SAG GUIDE

A suspension fork is effective at both absorbing bump forces and helping the tire to track the ground for improved traction and braking control. When in active mode, a fork will rely on sag to keep the front tire in better contact with the ground during braking. The chart on Page vi should be used as a general guideline.

To determine the bike's specific front suspension travel adjustments and recommended settings, please refer to the fork manufacturer's technical manual.

AIR SPRUNG FORKS

As a general guide, pump the main chamber (main spring) to a psi equal to 60% of your rider's weight in pounds (2.2lb = 1kg). Adjust the fork's sag by using the same procedure used for accurately adjusting the sag on the rear shock as described on Page vi .

COIL SPRUNG FORKS

Springs on these types of forks are set at the factory. Most have a simple preload adjuster that allows the rider to make the fork firmer or softer depending on rider weight. The heavier the rider, the firmer the spring setting should be. If with no preload you are not achieving the recommended sag then a softer spring is needed and if with maximum preload you are achieving too much sag then a harder spring is needed.

To check rebound, turn the rebound-damping knob (if applicable) counter-clockwise until it stops. With full body weight, push down on the fork forcefully with the front brake on and watch (and feel) how the fork rebounds. Turn the rebound damping knob clockwise until the fork rebounds slightly slower than with no damping (the heavier the rider, the more damping will be required).

SUGGESTED FRONT SUSPENSION SAG GUIDE (ALL TYPES)

FORK TRAVEL (MM)	SAG (MM)
85/ 90 MM	12-17 MM
100 MM	15-20 MM
120 MM	18-30 MM
140/145 MM	28-37 MM
170 MM	34-50 MM
180 MM	36-54 MM
200 MM	40-60 MM