

KING CAN GEN 2
SHOCK AIR VOLUME
ADJUSTMENT AND TUNING

M MANITOU



MANITOU

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WARRANTY

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INTRODUCTION

This guide is intended to provide the steps necessary to adjust the air volume on Mara Gen 2 shocks equipped with King Can air cans.

⚠ WARNING ⚠

We highly recommend that service to this component be performed by a certified bicycle mechanic. Failure to follow instructions presented in this manual could lead to serious injury or death. Any questions about the servicing of product or the manual itself should be directed to Hayes Customer Support at:

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	Phone: 888.686.3472
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VOLUME ADJUSTMENT



- Consult the service guides for complete service and assembly instructions or if removal of the air can is needed. For volume adjustment, removal of the shock from bike may not be necessary depending on the layout of the bikes suspension.
- **Mara Gen 2 Balance Groove shocks use air cans with Balance Groove Technology. This groove balances the positive and negative air pressures as the shock is cycled.**

1

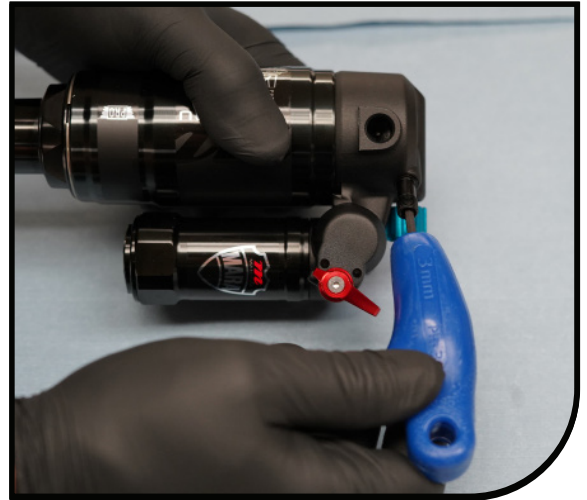
Remove valve cap, thread shock pump on. Note air pressure and use shocks release valve to remove all air from shock.

- Before removing the air can, ensure all air is released from both chambers and the shock is as full extension
- It is recommended the air is released slowly in 100psi increments by pressing the shock pumps bleed button. Cycle the shock between increments to ensure the air chambers balance and release evenly. (note air pressure before releasing) This process should be completed with the shock in the bike or a hand dyno.
- If the shock “sucks down” (negative chamber does not release causing the eye to eye to shrink, cycle the shock or re-pressurize until the eye to eye is extended to the nominal measurement.

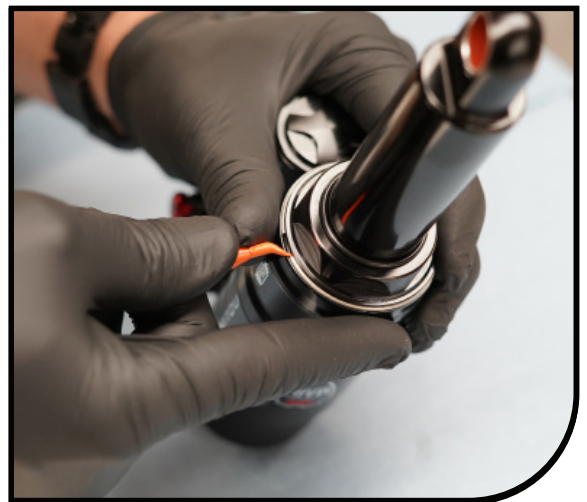


VOLUME ADJUSTMENT

- 2 (Use a 3mm allen key to gently depress the valve, ensuring all air is released.)



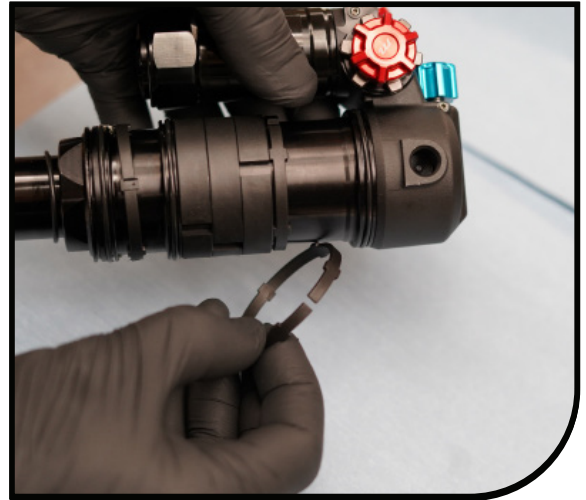
- 3 Remove snap ring and slide outer air can sleeve off of the inner can. (inner can does not need to be removed) FIG 1.



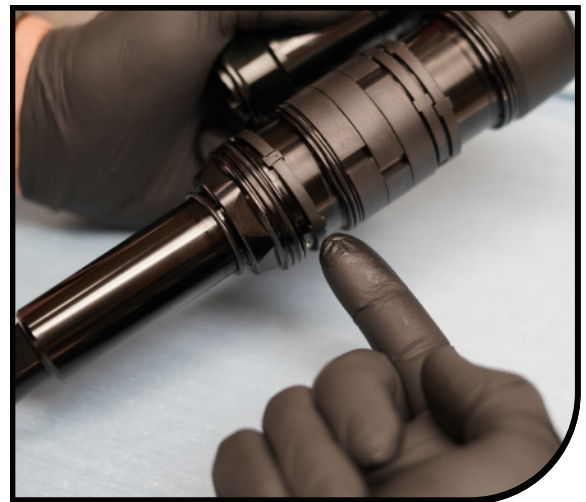
VOLUME ADJUSTMENT

- 4** Positive Air volume can be tuned by adding or removing volume spacers in the recess between the middle O-ring and upper O ring. (see pages 8-12 for advanced tuning, spring curve graph, and diagram)

NOTE: High volume Band 142-37512-K064 provides 3x volume adjustment of the castle spacer 142-37512-K039



- 5** Negative volume is set for the shock stroke and eye to eye. The factory set volume is the setting Manitou recommends, altering this can effect the eye to eye length and top out feel of the shock.



VOLUME ADJUSTMENT

- Slide outer air can sleeve onto inner can. Install snap ring. Air shock. Pressure should be increased in increments of 75psi.

NOTE:

With the shock pump attached cycle the shock a few times past the sag point to balance the positive and negative chambers.

The first few cycles may feel firm / top out, this is normal until the negative is balanced

When the desired air pressure is achieved, cycle the shock and recheck the pressure, note pressure and Go Ride!



ADVANCED TUNING

See notes below for advanced tuning

- 1** For initial setup refer to the setup guide for the specific Mara model. If initial setup is complete and the rider wishes to tune further see below.

It is recommended that air can maintenance is performed after 50 hours of normal riding and a complete service conducted at 250 hours. Certain conditions, such as prolonged riding in dusty or wet terrain, may necessitate servicing the shock at earlier intervals. Always note the shock's air spring and damper settings prior to a service to reduce potential re-tuning!

- Keep a notebook with detailed ride notes as the rider changes air pressure, volume, compression and rebound settings. This will allow the rider to return to a setting that was preferred for a certain condition.
- As the air pressure increases, rebound damping must be added (slowed down) to maintain balance with fork.
- The rider should only make one adjustment at a time, note the change, ride, note. Then make next adjustment.

INCREASING AIR VOLUME

1 Increasing the air volume (Removing volume spacers) creates a more linear spring curve with reduced mid-stroke support and end-stroke ramp-up.

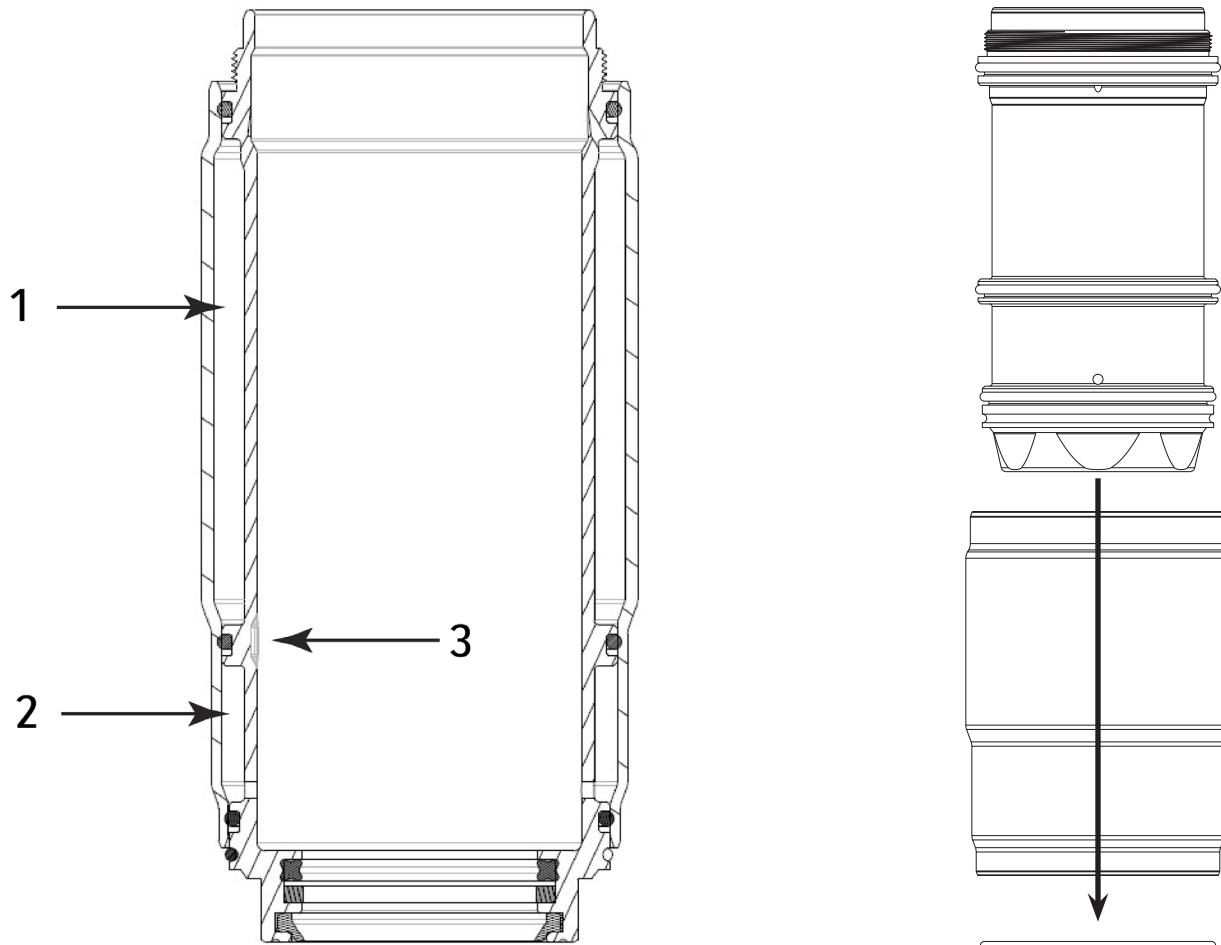
- This will allow the rider to more easily use the ending stroke of the suspension. If the rider is happy with the sag and initial spring rate, but is unable to use full travel increasing your air volume would be a good first step.
- Manitou recommends removing one High volume Band (142-37512-K064) at a time to achieve a large change in end of stroke ramp. Fine tuning of air volume can be achieved through 1-2 castle spacers (142-37512-K039)
- Frames with progressive linkage rates, lighter weight, less aggressive riders or conditions such as wet slippery roots and technical terrain could all benefit from a larger air volume by removing split rings.
- Increasing air volume but maintaining the same end of stroke support will require an increase in air pressure. By combining these 2 changes, beginning and mid-stroke support can be increased without limiting use of full stroke.

REDUCING AIR VOLUME

1 Reducing the air volume creates a more progressive spring curve with increased mid-stroke support and end-stroke ramp-up.

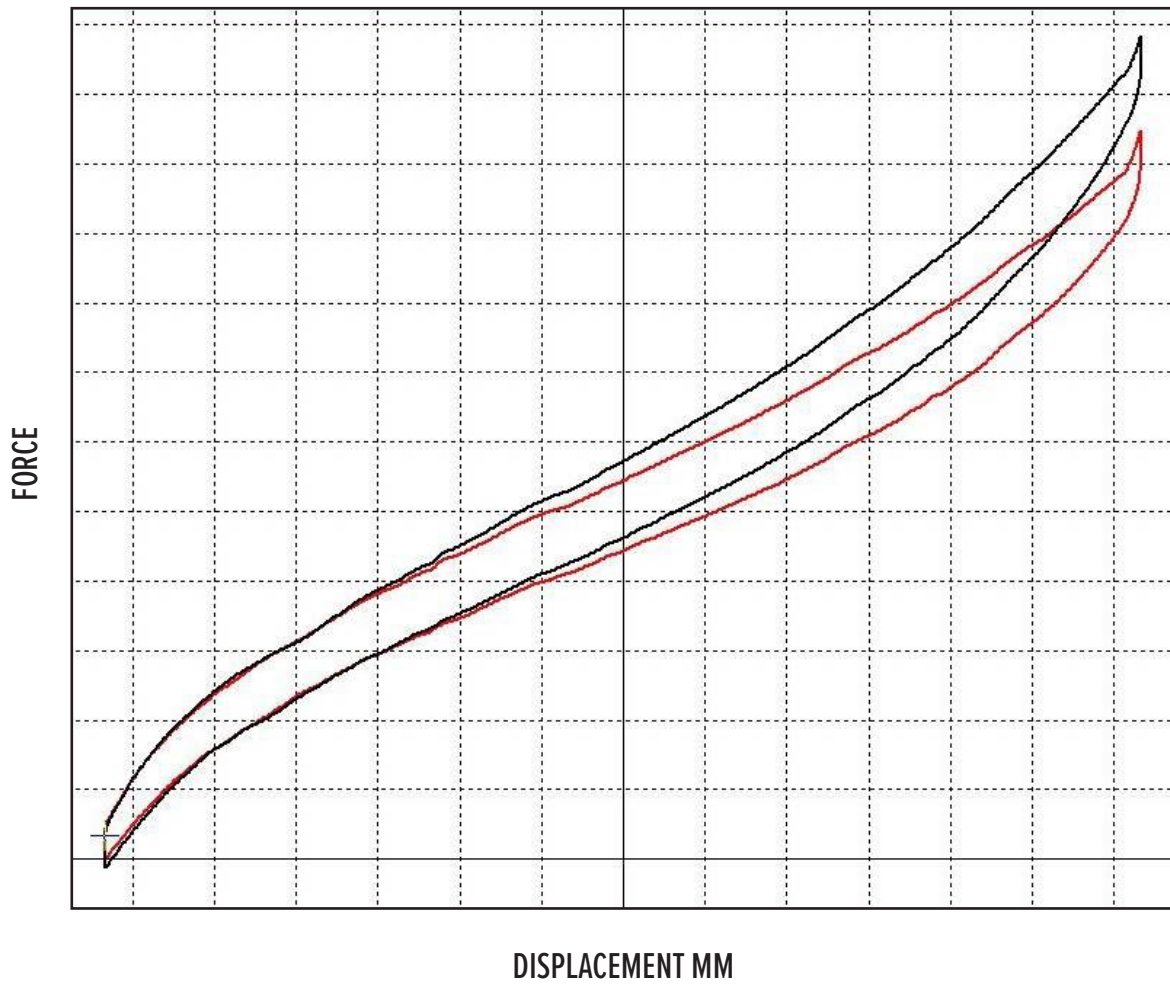
- This will give the rider more support off bigger hits and aggressive riding.
- Riders who find themselves using full travel too easily but are happy with their sag and initial spring rate will find that reducing their air volume would be a good first step.
- Manitou recommends adding one High volume Band (142-37512-K064) at a time to achieve a large change in end of stroke ramp. Fine tuning of air volume can be achieved through 1-2 castle spacers (142-37512-K039)
- Frames with linear linkage rates, heavier, more aggressive riders, steep trails, jump trails or bike parks could all benefit from a smaller air volume by adding additional split rings.
- Reducing air volume but maintaining the same end of stroke support will require a decrease in air pressure.
- If the rider would like a smaller air volume High Volume Bands are available. Select shock sizes Manitou offers the Lite can for XC use. This air can will have a fixed smaller air volume that is not adjustable with volume spacers.

KING CAN GEN 2 DIAGRAM



ITEM #	PART DESCRIPTION
1	INSERT ADDITIONAL SPLIT RINGS HERE FOR POSITIVE AIR VOLUME TUNING
2	NEGATIVE CHAMBER
3	BALANCE GROOVE

POS VOLUME ADJUSTMENT RANGE



Max Air Volme



Minimum Air Volume

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