La City

Owner's Manual

MOTION

ENGINEERING

INNOVATION CENTER FOR MOBILITY & SPORT

About

This User Manual contains only information about our La City suspension.

This manual does not constitute a comprehensive documentation on the safety and maintenance of your bike.

This manual does not include the assembly instructions for your bike.

CONTENTS

Warranty

Motion Engineering suspension products are covered by the terms of the Motion Limited Warranty. These terms are outlined on our website: www.motion-engineering.fr. Please review the warranty exclusions mentioned in the terms. For example, damages resulting from an accident or improper maintenance are not covered.

The internal parts of the fork are covered by a one-year warranty (two years in EU countries) against defects in materials or workmanship. The term "internal parts" includes items such as seals, springs, elastomer elements/parts, protections, spacers/bushings/bearings. Normal wear and tear of these elements/parts is NOT covered by this one-year warranty (two years in the EU).

For a warranty claim to be considered, the fork must be sent to the Motion Engineering headquarters located at 113 Impasse de Chavanne 6400 ARNAS – France after prior request via the following email address: contact@motion-engineering.fr.

SAFETY INFORMATION

The La City suspension fork is designed for urban/suburban use.

Do not use the suspension for:

- **Extreme forms of jumping/racing such as All Mountain, freeride, downhill, enduro, cross-country...**
- **Steep inclines/drops.**

AFTER AN ACCIDENT OR IMPACT: DO NOT USE YOUR BIKE if you notice any sign of damage, including but not limited to: broken, shattered, or delaminated carbon fibers.

THE FOLLOWING CONDITIONS INDICATE THAT THE FORK IS SERIOUSLY DAMAGED:

- Any unusual dull noise, cracking, clicking, or unexplained noises,
- Variation in travel and/or function,
- Damage due to impact or accident (cracks, deep scratches, grooves, dents, or bending),
- Visible cracks, a white or milky color present in the carbon fiber section.

CONTINUING TO RIDE WITH A DAMAGED FORK INCREASES THE CHANCES OF FORK FAILURE, RESULTING IN POTENTIAL INJURY OR DEATH TO THE CYCLIST.

Important Composites Message

The fork La City is made from compositematerials also known as “carbon fiber.” It is important to have some fundamental knowledge about composite materials. Composite materials using carbon fibers are lightweight and strong, but in the event of a violent impact or overload, they do not bend, they break. For your safety, it is important to properly perform all maintenance, repair, and inspection operations on parts made of composite materials (frame, stem, fork, handlebar, seat post, etc.).

TECHNICAL INFORMATION

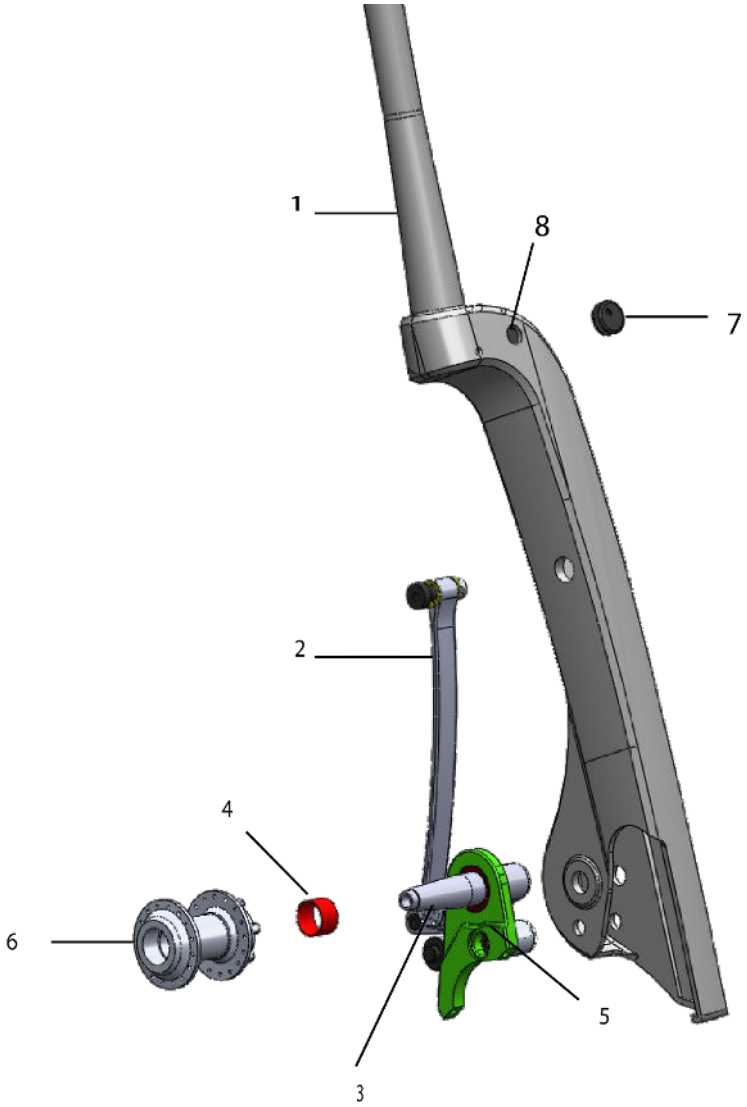
Specifications

La City suspension

Wheel size	27,5 ” et 29 ”
Travel	50 mm
Hub compatibility	Single-arm hub type Lefty 60 standard
Axle to crown	475mm
Offset	44mm
Steerer	Tapered 1”1/8 - 1”1/2
Disc diameter min.	160mm
Maximum Weight limit (rider + bike)	150 kg

Identification

1. *Steerer*
2. *Carbon blade*
3. *Wheel axle*
4. *Wheel spacer*
5. *Brake caliper support*
6. *Hub*
7. *Cable guide*
8. *Brake hose routing hole*



SETTING

The design of the La City fork has been conceived without the need for adjustments, aiming to simplify its use for cyclists. It will automatically adjust to the rider's weight without requiring any manipulation on their part.

MAINTENANCE

The La City suspension benefits from a reduced maintenance program due to its design. However, it is important to check the following points. This maintenance program is provided as a guide only. You should establish a maintenance program appropriate to your riding style and usage conditions.

Service Item	Frequency	Performed by
Damage inspection	Before every ride	Owner
Check Fastener Torque	First ride & every 4-5 rides	Owner
Checking bearings	Every years.	Owner

In case of play in the mechanism or blockage, the suspension may require a change of bearings. For this, the fork must be sent to Motion Engineering after prior request to contact@motion-engineering.fr.

CLEANING

For cleaning, use only a solution of water and mild soap. A mixture of clean water and liquid dish detergent will work perfectly. Blow off any thick dirt before wiping. Blow indirectly

TIGHTENING TORQUES

Correct tightening torque for the fasteners (bolts, screws, nuts) on your bicycle is very important to your safety.the durability and performance of your bicycle. We urge you to have your Dealer correctly torque all fasteners using a torque wrench. If you decide to tighten fasteners yourself always use a good torque wrench!

Description	Nm	In Lbs	Loctite™
Wheel Axle Bolt	15	133	NLGI-2 grease
Brake Mouting Bolts	9	80	242 (blue)
Expander bolt	5-6	44-53	

BRAKE ADAPTER USAGE

The La City suspension is designed for a 160mm disc. You will not be able to install a 140mm disc. A 180mm disc can be used by mounting an adapter. (Example: Shimano XTR SM-MA90 PM - PM 180mm Adapter)

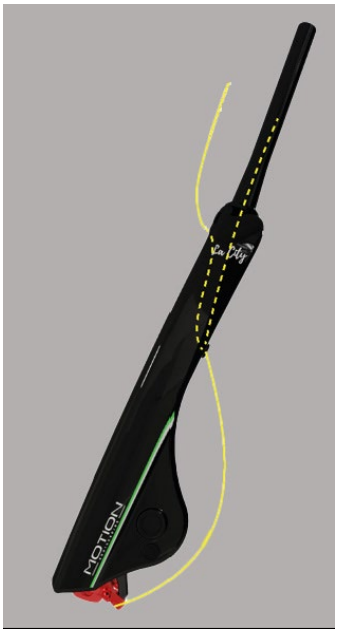
BRAKE ROUTING :

The La City suspension has been designed to route brake hoses through the frame. Two configurations are possible depending on the type of brake caliper used

CASE n°1 : Brake caliper with a fixed hose outlet

The brake caliper has a fixed hose outlet like the examples below:

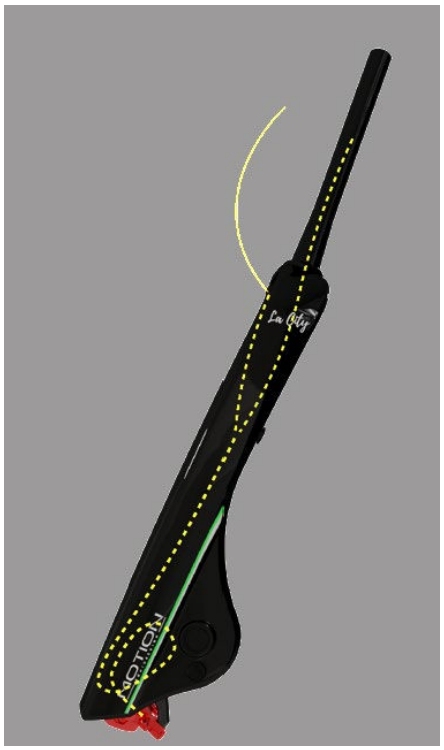
In this case, the cable routing is semi-integrated as shown in the diagram below :



CASE n°2 : Brake caliper with an adjustable hose outlet (Banjo)

The brake caliper has an adjustable hose outlet like the example below:

In this case, the cable routing is integrated as shown in the diagram below:



INSTALLATION OF THE LA CITY SUSPENSION

1. **Removal of the current suspension**

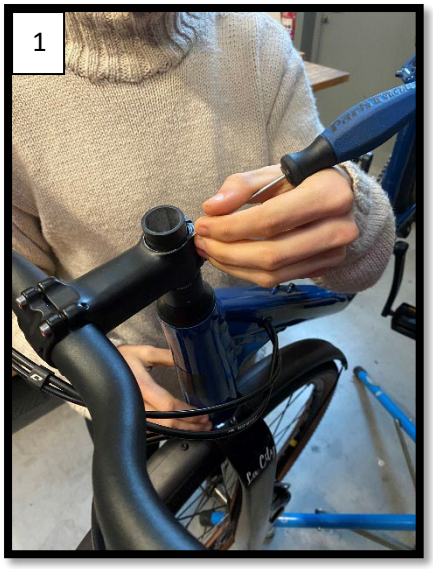
If you are replacing your current fork, start by removing the front wheel from the bike, then loosen and remove the brake caliper. Next, loosen the headset and the stem that is mounted around the fork steerer and slide the fork out of the steerer tube. The suspension is now removed.

2. **Installation of the La City fork**

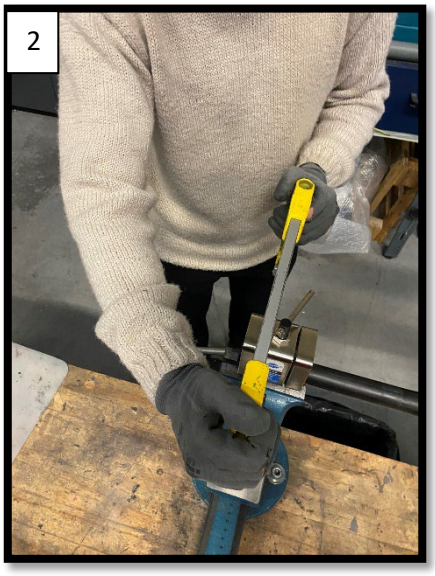
Steerer tube cutting (optional):

If you have just removed your old fork, measure the steerer tube and transfer this measurement to the steerer tube of the La City suspension.

If you do not have a reference fork, insert the new fork into the stem's steerer tube with the headset, stem, and spacer(s), and securely tighten the clamping bolts. Use a marker or a piece of tape, or a tool to mark the cutting line on the fork steerer, taking into account the desired height of the steerer. (Figure 1)



Make sure you have the appropriate tools for cutting the carbon steerer, such as a hacksaw equipped with a specific blade for carbon. Slowly and carefully cut the steerer 5mm below the marked cutting line. It is essential to cut straight and evenly to achieve a clean cut surface. (Figure 2)



After cutting the steerer to the correct length, reinstall the fork into the stem's steerer tube and securely tighten the clamping bolts. Verify that the cut is the correct length by adjusting the handlebar height according to your preferences.

Before installing the suspension into the steerer tube, ensure that the ball bearings are correctly in place. (Figure 3)

Installation of the expander:

Gently insert the expander into the carbon fork steerer. (Figure 4).

Be careful not to damage the carbon fibers inside the steerer.

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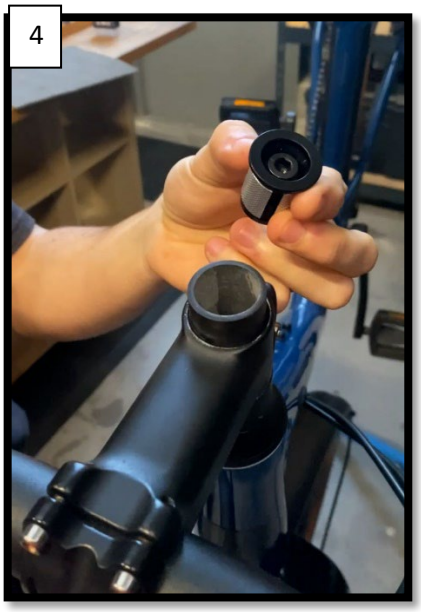

Use an Allen key to tighten the expander inside the fork steerer. (Figure 5).

Make sure not to overtighten to avoid damaging the steerer.

Then, tighten to 5-6 Nm (44-53 In lbs) with a torque wrench.

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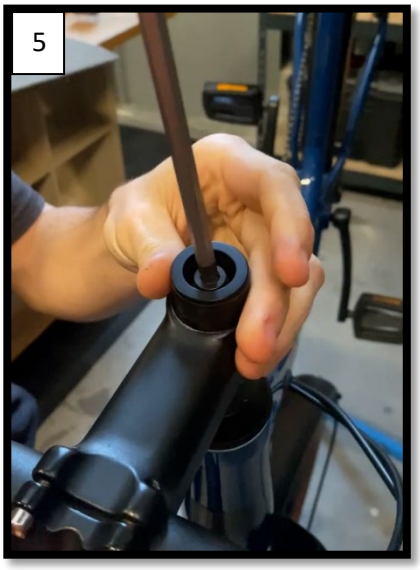

After that, screw the top cap until it makes contact (Figure 6). Then, loosen the stem bolts. Re-tighten the top cap bolt until there is no more play in the headset.

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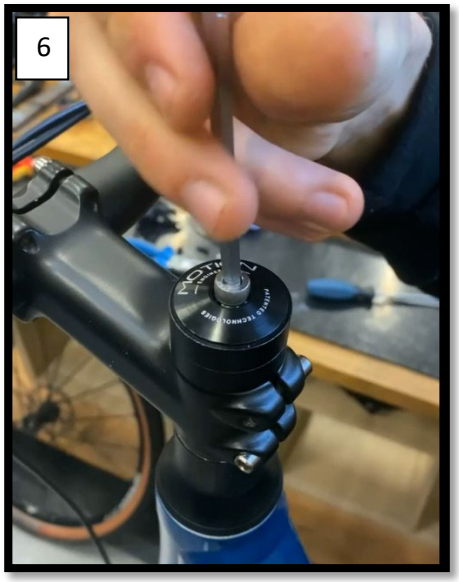

3. Routing of brake cables

Install the brake cables inside the fork according to the previously described configuration. (Brake hose routing) Figures 7 and 8.

Make sure to reinstall the rubber cable guides.

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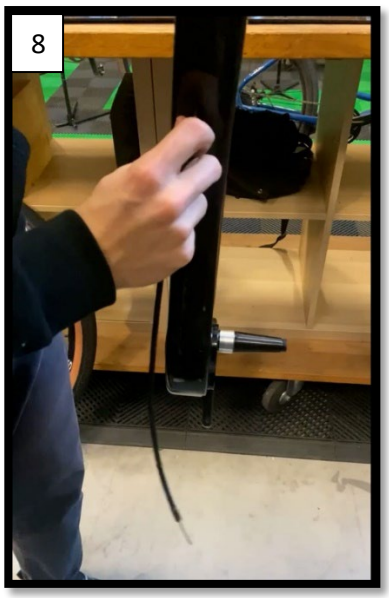


NOTE: The minimum brake disc size should be 160mm

4. Wheel installation

Ensure that the wheel sleeve on the hub is in the correct position. (Figure 9).

Apply light grease to the threads and bearing areas of the inner and outer hub.

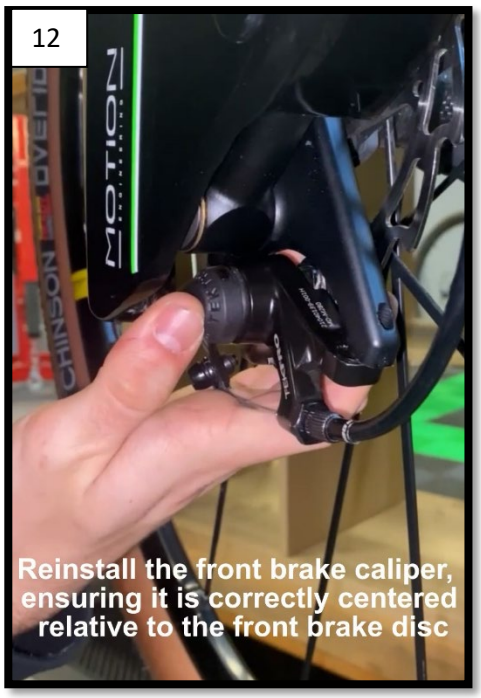
Check the inside of the single-arm wheel hub for any mud or contamination. Wipe with a cloth if necessary. Apply light grease to the inner ring of the hub bearing.

Align and slide the wheel directly onto the axle. Use a 5mm Allen key to screw the axle nut onto a few threads to confirm correct thread engagement. (Figure 10)

Once confirmed, tighten the axle bolt to 15 Nm (133 In Lbs) with a torque wrench. (Figure 11)

Apply Loctite 242 (Blue) to the threads of the brake caliper mounting bolts and attach it to the brake caliper mount using a 5mm Allen key. (Figure 12)

At the same time, make sure that the brake disc is positioned between the brake pads.



Using a torque wrench, tighten the brake caliper bolts to 9 Nm (78 in-lbs). Figure 13.

Spin the wheel to ensure it rotates freely. Remember to test the brakes to ensure they function correctly before using the bike.

Wheel Removal

1. Secure the bike on a work stand with the front wheel slightly off the ground.
2. Use a 5mm Allen key to loosen the upper and lower bolts of the front brake caliper.
3. Once removed, make sure to protect it to avoid any potential damage during the ongoing procedure.
4. Use a 5mm Allen key to loosen the hub fixing bolt (counterclockwise). Loosen until the wheel disengages from the hub.

Make sure the axle bolt is completely disengaged before attempting to remove the wheel. Never try to pull the wheel off forcefully.

Never pull the wheel off forcefully. If the axle bolt is still engaged this will damage the threads.

Important:

While the wheel is off, take steps to prevent damage to the spindle .

Allow the bike to remain in the stand until the wheel is re-installed.

Likewise, while the wheel is removed, be sure to protect the wheel, hub, and brake rotor from damage or contamination. Cover the hub opening to prevent contamination of the inside of the hub.

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