• ENGLISH

MANITOU

02 OWNER'S MANUAL

SIX DELUXE

• Betriebsanleitung • Manual del usuario
• Manuel de l'utilisateur • Manuale del proprietario
• Handleiding • Manual do proprietário • オーナーズマニュアル

P/N 042037

answer products incorporated
28209 Avenue Stanford, Valencia, California 91355-3984 • 661 257 4411 • fax 661 294 4179

MANITOU SUSPENSION FORKS

CONGRATULATIONS ON CHOOSING A 2002 MANITOU SIX DELUXE FORK. This Manitou SIX DELUXE fork is fully assembled and ready to be installed onto your bicycle. It comes equipped with a 1 1/8-inch threadless steerer tube and is available with a V-brake-style hangerless arch (or there's an optional attachable cable hanger which is available through your dealer). SIX DELUXE forks are also available in a disc brake only version.

2002 MANITOU SIX DELUXE FORK LINE

SIX DELUXE.....80 MM TRAVEL / COIL SPRINGS / TPC DAMPING / SINGLE CROWN

You can also download this manual at www.answerproducts.com.

⚠ GENERAL WARNING **BICYCLING IS A HAZARDOUS ACTIVITY THAT REQUIRES THAT THE RIDER STAY IN CONTROL OF HIS OR HER BICYCLE AT ALL TIMES. READING THIS MANUAL ENTIRELY, AND PROPERLY MAINTAINING YOUR BICYCLE AND SUSPENSION FORK, WILL REDUCE THE POSSIBILITY OF INJURY OR POSSIBLE DEATH. PRIOR TO RIDING YOUR BICYCLE, YOU SHOULD INSPECT YOUR SUSPENSION FORK TO ENSURE THAT NO DAMAGE HAS OCCURRED DURING THE COURSE OF RIDING. DO NOT RIDE YOUR BICYCLE IF THE FORK SHOWS ANY SIGNS OF BENDING, CRACKING, CREAKING, LEAKING, OR IF IT IS MISSING ANY OF THE ORIGINALLY SUPPLIED COMPONENTS. ANY FALL FROM YOUR BICYCLE CAN RESULT IN SERIOUS INJURY OR EVEN DEATH. FOLLOWING THESE INSTRUCTIONS CAN HELP YOU REDUCE THE RISK OF BEING INJURED. IF YOU ARE A MODERATE OR AGGRESSIVE OFF-ROAD RIDER, OR RIDE AT LEAST THREE TIMES A WEEK OVER ROUGH TERRAIN, ANSWER PRODUCTS RECOMMENDS RETURNING YOUR SUSPENSION FORK EVERY 2 YEARS FOR A THOROUGH INSPECTION AND UPDATE. TAKE YOUR FORK TO A MANITOU AUTHORIZED DEALER WHO CAN ARRANGE FOR SHIPMENT TO ANSWER PRODUCTS, OR YOU MAY CALL ANSWER PRODUCTS AT (661) 257-4411 TO HAVE YOUR FORK SHIPPED DIRECTLY.**

IMPORTANT: The SIX DELUXE fork is an off-road fork, and as such, does not come with proper reflectors for on-road use. Have your dealer or mechanic install proper reflectors to meet the Consumer Product Safety Commission's (C.P.S.C.) Requirements for Bicycles if the fork is going to be used on public roads at any time. If you have questions regarding C.P.S.C. Standards, or would like to purchase a reflector bracket kit (Part #85-3674), contact your dealer.

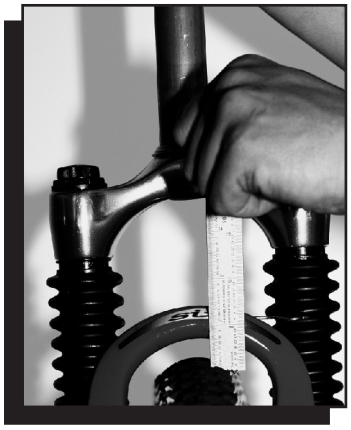
CONSUMER SAFETY INFORMATION

1. Never remove or have the steerer tube or stanchions removed from the crown. The steerer tube and stanchions (inner legs) are press fit at the factory. Press fit inner legs have higher performance versus bolt-in inner legs, but can not be pressed out. Pressing them out will permanently damage the crown beyond repair and render it unsafe for any continued use.
2. Never attempt to thread a threadless steerer tube. Cutting threads will weaken the steerer tube and cause an unsafe condition. The only safe thing to do is to obtain the proper crown/steerer from your dealer, or contact the Answer Products Warranty Department at (661) 257-4411.
3. Any other alteration or modification to your fork should be considered unsafe. Contact the Answer Products Warranty Department prior to modifying your fork in any way for safety information.
4. Do not use the SIX DELUXE fork if any parts are broken, bent, cracked, or you suspect may be damaged. Contact your dealer or the Answer Warranty Department at (661) 257-4411 if you have any questions concerning the integrity or condition of your fork.
5. Answer Products recommends that you inspect your fork before every ride for wear and damage. Inspect the crown, inner legs, outer legs dropout and brake arch areas for cracks or damage.

WARRANTY INFORMATION

Any Answer Products fork found by the factory to be defective in materials and/or workmanship within one year from the date of purchase will be repaired or replaced at the option of the manufacturer, free of charge, when received at the factory with proof of purchase, freight prepaid. This warranty does not cover breakage, bending, or damage that may result from crashes or falls. This warranty does not cover any fork that has been subject to misuse or whose serial number has been altered, defaced or removed. This warranty does not cover paint damage. Any modifications made by the user will render the warranty null and void. This warranty is expressly in lieu of all other warranties, and any implied are limited in duration to the same duration as the expressed warranty herein. Answer Products shall not be liable for any incidental or consequential damages.

If for any reason warranty work is necessary, return the fork to the place of purchase. At that time, instructions for repair, return, or replacement shall be given. Customers in countries other than USA should contact their dealer or local distributor.



1

Tire Clearance
Reifenabstand
Espacio libre de la cubierta
Distance arceau/pneu
Spazio libero del pneumatico
Bandspeling
Folga do pneu
タイヤクリアランス



2

Checking Oil Level
Kontrolle des Ölstandes
Verificación del nivel de aceite
Vérification du niveau d'huile
Controllo del livello dell'olio
Oliepeil controleren
Verificação do nível de óleo
オイル量のチェック

INSTALLATION INSTRUCTIONS

Ensure that the proper steerer tube has been delivered on your Manitou SIX DELUXE. The steerer tube may need to be cut to length to fit your bicycle head tube. If you are not familiar with this procedure, or do not have the proper tools to cut the steerer tube, it is recommended that you seek a dealer with a qualified bicycle mechanic to perform installation.

⚠ WARNING THE STEERER TUBE AND STANCHIONS (INNER LEGS) ARE A ONE-TIME PRECISION PRESS FIT AT THE FACTORY AND CANNOT BE REMOVED FROM THE CROWN. REPLACEMENT OF THE ENTIRE CROWN/STEERER ASSEMBLY MUST BE DONE TO CHANGE STEERER TUBE LENGTHS OR DIAMETERS. REMOVING AND REPLACING THE STEERER TUBE OR STANCHIONS WILL RESULT IN AN UNSAFE CONDITION AND SHOULD NEVER BE DONE.

BREAK-IN

Your new fork is designed to break in during your first few rides (about 20 hours total riding time). Prior to break-in, you may notice your fork binds slightly and feels notchy. Following the break-in period, your fork will feel much smoother and will react to bumps much better than when you first put it on your bike. After 20 hours, you may want to recheck your rebound and preload adjustments (when applicable) to fine tune the fork completely. Between services on your Manitou fork, all you must do is lubricate your fork as needed with Manitou Prep M (part number 85-3810 for the lube and 85-3812 for the injector gun) via the Microlube grease ports located on the back of the fork legs.

FORK INSTALLATION

1. Remove the old fork from your bicycle.
2. Measure and cut the steerer tube to fit your bicycle head tube. You can use your old fork as a guide for cutting the steerer tube length.
3. Remove the headset crown race from the old fork and press onto the Manitou SIX DELUXE steerer tube until the race is seated over the crown.
4. Clean and grease the headset bearings and races.
5. Install the lower bearings (if applicable) on the fork crown race.
6. Insert the steerer tube into the head tube of the frame.
7. Install the upper bearings, stem spacers, and stem.
8. Install the stem cap and bolt. Tighten the bolt to headset manufacturer's specifications.
9. Install the handlebars to desired height and the torque stem pinch screws or stem clamping system to manufacturer's specifications.
10. Install the brakes and adjust per the manufacturer's instructions.
11. For all SIX DELUXE forks, adjust the front wheel quick release to clear the 0.275" (7 mm) thick secondary catch dropout. The quick release must be tightened after it is properly seated into the dropout counter bores to manufacturer's specifications. Ensure that there is adequate thread engagement (4 or more threads with the release adjusted to lock).

NOTE: 2002 Manitou SIX DELUXE forks are equipped with a secondary catch dropout to retain the wheel in the fork in the event the quick release comes loose.

⚠ WARNING WHEN INSTALLING THE WHEEL OR A NEW TIRE, CHECK TO MAKE SURE THE FORK ACHIEVES MINIMUM TIRE CLEARANCE. MEASURE FROM THE HIGHEST POINT ON THE TIRE TO THE BOTTOM OF THE BRAKE ARCH. THIS MEASUREMENT SHOULD BE 10 MM (SEE FIGURE 1).

IMPORTANT: The Manitou SIX DELUXE should not be used if any parts appear to be or are damaged. Contact your local dealer or Answer Products for replacement parts.

MAINTENANCE

IMPORTANT: Use of fork boots is required to keep your Manitou SIX DELUXE fork performing well and the warranty in effect. Use of this fork without boots will shorten the life of the fork, decrease the time between maintenance intervals, reduce the performance and void the warranty.

IMPORTANT: When lubricating the fork with lubricant through the lubricant ports, it is important to note the lubricant is being forced between the upper and lower bushings. If the area is overfilled, the lubricant may force the upper bushing and dust seal out. You should only insert lubricant to the level at which stiction (stickiness when you compress the fork) is no longer felt.

IMPORTANT: Before every ride you should:

1. **Ensure that quick release skewers are properly adjusted and tight.**
2. **Wipe the inner legs and clean and check entire fork for any obvious damage.**
3. **Check the headset for proper adjustment.**
4. **Ensure that the front brake cable is properly routed and check brake adjustment.**

CHECKING OIL LEVEL

IMPORTANT: Setting the proper oil level in your Fluid Flow damped fork is critical. Fluid Flow damping is located in the right leg of your Manitou SIX DELUXE fork. Not enough oil will allow foaming and reduce the performance. Too much oil will restrict travel and may cause damage to the system and create an unsafe riding condition. Finish reading this entire section prior to altering the oil level.

To check the oil level on the Manitou SIX DELUXE, remove the compression assembly located in the top of the right leg (as you are looking at the fork from the rider's position). Leave the left side spring stack in place to keep the fork fully extended. Use a tape measure or "dip stick" to measure from the top of the fork crown down to where the oil sits (see figure 2). The oil level for the Manitou SIX DELUXE should be per following table.

Fork Model	Oil Level
Manitou SIX DELUXE	101 mm (4 inches)

NOTE: Use Maxima SAE 5WT fork oil suspension fluid only.

If you have any questions regarding your 2002 Manitou SIX DELUXE suspension fork, contact the Answer Products Warranty Department at (661) 257-4411. You can also log on to www.answerproducts.com and download this manual or see detailed instructions on how to service your suspension fork.

Thank you again for choosing a 2002 Manitou SIX DELUXE suspension fork.

DEALER SERVICE ADDENDUM SIX DELUXE

This section is designed to help a qualified bicycle mechanic tune and maintain your Manitou suspension fork.

MEASURING SAG To measure sag, you'll need a tape measure, a pencil, a piece of paper and a helper.

1. Measure the distance from the front axle's centerline to the bottom of the upper crown when no one is sitting on the bike, and write this distance down. Remember the exact locations of the two points because you'll need to use them later.
2. Have the rider sit on the bike and measure the distance between the same two points as in step one. It is important to be in the normal riding position (weight centered) with the rider's feet on the pedals.
3. Subtract the second measurement from the first. The resulting measurement is the static sag or ride height.

SAG MEASUREMENT

Fork Travel	Sag
80 mm	12 - 16 mm

RECOMMENDED SPRINGS

SIX DELUXE	Rider Weight	Recommended Spring Kit
	100-150 lbs.	Soft ride kit (Part #85-9127)
Standard Set-up	150-170 lbs.	Medium ride kit (Part #85-9128)
	170-190 lbs.	Firm ride kit (Part #85-9129)
	190 plus lbs.	Extra Firm ride kit (Part #85-9219)

CHANGING COIL SPRINGS Once you have checked sag, you can either preload the spring via the cap on top of the left leg, or even better, make spring changes to accommodate for your riding style and weight.

1. Start by removing the preload adjuster by unscrewing the cap from the top of the crown/leg assembly. A 1-1/16th inch or 27 mm socket will be necessary with the SIX DELUXE. Remember: The springs are housed only in the left leg on 2002 Manitou suspension forks.
2. With the adjuster assembly removed, the spring stack is now accessible.
3. Select the appropriate coil spring for your weight and riding style (refer to the above spring chart for recommended rates).
4. Apply a liberal amount of grease to the outside surface of the new coil spring. We recommend any thick grease (not light greases like Prep M). Install the new spring stack.
5. Reinstall the preload adjuster assembly, taking care not to cross-thread the cap. It should thread in by hand and does not need to be tightened with a wrench (finger-snug is recommended).

MICROLUBE All you need is a Microlube lubricant gun (Part #85-3812) and Manitou's Prep M (Part #85-3810) suspension fork lubricant. Brush any dirt from the grease ports, insert the grease gun into the small fitting located at the back of the fork and squeeze a few times. Continue injecting grease and push the fork up and down until stiction is eliminated.

MAINTENANCE AND SERVICE When servicing the fork, take the time to inspect all parts for excessive wear or damage. There are basically four aspects of a fork that will require attention: the stanchions (inner legs), the bushings in the outer legs, the spring stack and the damping fluid. Inspecting any of these parts requires disassembly of the fork. Pay close attention to the bushings, which can be damaged by contamination in severe conditions. Replace any worn or damaged parts that are discovered.

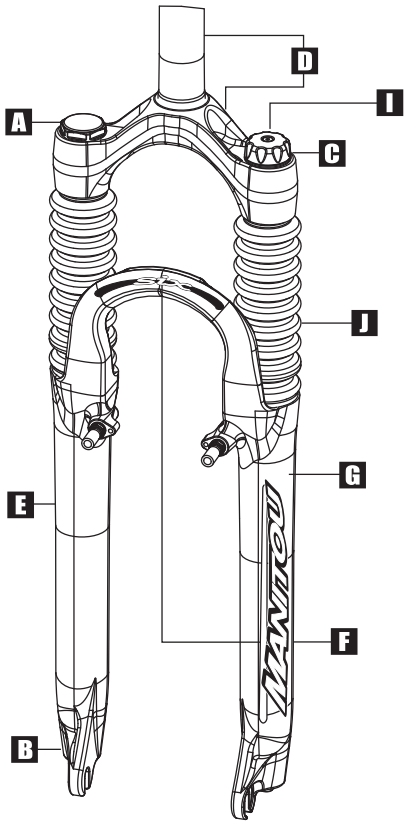
SERVICE SCHEDULE Suggested Service for Manitou Forks

NORMAL CONDITIONS – Short/Infrequent Rides
- Lube fork as needed with Prep M lubricant via the Microlube ports.
- Disassemble, clean and lubricate fork every 4-5 months.
- Lubricate spring stack as needed.

NORMAL CONDITIONS – Long/Frequent Rides
- Lube fork as needed with Prep M lubricant via the Microlube ports.
- Disassemble, clean and lubricate fork every 10-14 weeks.
- Lubricate spring stack as needed.

SEVERE CONDITIONS (MUD, RAIN, SNOW, EXTREME DUST) – Short/Infrequent Rides
- Lube fork as needed with Prep M lubricant via the Microlube ports.
- Disassemble, clean and lubricate fork every 6-8 weeks.
- Lubricate spring stack as needed.

SEVERE CONDITIONS (MUD, RAIN, SNOW, EXTREME DUST) – Long/Frequent Rides
- Lube fork as needed with Prep M lubricant via the Microlube ports
- Disassemble, clean and lubricate fork every 4-6 weeks.
- Lubricate spring stack as needed.



SERVICE PARTS KITS

SIX DELUXE

A	Compression Damping Assembly	85-3014
B	Rebound Damping Assembly	85-9268
C	Preload Adjuster Assembly	85-9073
D	Crown/Steerer Tube Assembly, Alloy	85-8209
E	Outer Casting Assembly, Red	85-9196
F	Sticker Kit	85-4931
G	Ride Kit Assembly, Soft	85-9127
	Ride Kit Assembly, Medium	85-9128
	Ride Kit Assembly, Firm	85-9129
	Ride Kit Assembly, Extra-Firm	85-9219
I	Knob Kit	85-4104
J	Boot Kit	85-4839

SPECIAL OFFERS

Spring kits and Prep M lubricant directly from Answer Products at a special introductory price for new purchasers of Manitou forks or Manitou-equipped bikes.

Prep M Grease Gun & Tube: $19.95
Spring Kits: $12.95

International orders add a $15 handling charge, credit card only.
Shipping and handling in the US included in the $19.95 price.

Call Answer Products at 661-257-4411 to order or visit the website at www.answerproducts.com.