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ANSWER PRECISION SUSPENSION

CONGRATULATIONS FOR CHOOSING THE LATEST STATE OF THE ART MOUNTAIN BIKE SUSPENSION FORK AVAILABLE. THE 1999 SX MODELS USE THE LATEST ONE PIECE OUTER LEG/ARCH TECHNOLOGY. BOTH HAVE STATE OF THE ART MCU/SPRING COMPRESSION SYSTEMS. THE SX SERIES USE THE NEW TWIN PISTON CARTRIDGE SYSTEM (TPC) THAT SURPASS ALL OTHER TYPES OF OIL DAMPED SYSTEM IN PERFORMANCE AND DURABILITY.

Your SX Fork is fully assembled and ready to be installed onto your bicycle and comes equipped with a 1 1/8" threadless steer tube. SX's are available with the V-Brake cable hangerless arch, post style disk brake mounts, and have an optional attachable cable hanger which is available through your dealer.

CONSUMER SAFETY INFORMATION

IMPORTANT: The SX Fork is a 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 contact your dealer.

1. Never remove or have the steer tube or stanchions removed from the crown. The steer tube and stanchions (inner legs) are press fit assembled at the factory. 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 steer tube. Machining threads will weaken the steer tube and cause an unsafe condition. The only safe thing to do is to obtain the proper crown/steerer from your dealer.
3. Any other alterations or modifications to your fork should be considered unsafe. Contact Answer Products Technical Support prior to modifying your fork in any way for safety information.
4. Do not use the SX Fork if any parts are broken, bent, cracked, or damaged. Contact your dealer or Answer Products Technical Support, (805) 257-4411, if you have any questions concerning the integrity or condition of your fork.
5. Answer Products recommends that you periodically inspect your fork for wear and damage. Inspect the Crown, Inner Legs, and Outer Leg Dropout and Brake Arch areas for cracks or damage. Before every ride check to ensure that the proper preload exists and that the positive rebound stop is in order to ensure that the fork can not over extend.

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, 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. In the USA, dealers should call Answer Products for a return authorization number (RA#). 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.

INSTALATION INSTRUCTIONS

Insure that the proper steer tube has been delivered on your SX. The steer 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 steer tube it is recommended that you seek a dealer with a qualified bicycle mechanic to perform installation.

WARNING: The steer 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 steer tube lengths or diameters. Removing and replacing the steer tube or stanchions will result in an unsafe condition and should never be done.

1. Remove old forks from bicycle.
2. Measure and cut the steer tube to fit your bicycle head tube.
3. Remove crown race from old forks and press onto SX Steerer until seated on crown (Figure 1).
4. Clean and grease headset bearings and races of bicycle.
5. Install lower bearings on fork crown race.
6. Insert steer tube into head tube of frame.
7. Install upper bearings, spacers, and stem.
8. Install stem cap and screw, tighten until slack just disappears.
9. Install handlebars to desired height. Torque stem handlebar pinch screws and stem clamping system to manufacturer's instructions.
10. Install cantilever brakes and adjust per manufacturers instructions.
11. Adjust front wheel quick release to clear the 0.275 (7MM) thick secondary catch dropout. The quick release must be tightened after it is properly seated into the dropout counter bores. Insure that there is adequate thread engagement (4 or more threads with the release adjusted to lock) due to the wider adjustment. Install front wheel to bicycle per manufacturers specification.
12. Install brake cable per manufacturers instructions:

Note: ***All 99 SX Forks are equipped with a secondary catch dropout.***

Note: ***The SX comes equipped with a hangerless arch. Brake cable hangers that attached to the arch are available through your dealer. Part number 85-3800, 99 SX Brake Cable Hanger Kit. See Figure 2***

WARNING: When installing wheel or any new tire check the minimum tire clearance. Measure from the highest point on the tire to the bottom of the crown. The minimum clearance allowed is:
2.75" (70mm) for 70mm travel forks
3.20" (80mm) for 80mm travel forks
Any less clearance can result in serious injury or death. Figure 3

MAINTENANCE

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

IMPORTANT: Use of fork boots is required to keep your SX performing well and your warranty in effect. Use of this fork with the boots removed will shorten the life, reduce the performance and void the warranty.

Your SX Fork requires periodic maintenance, cleaning, and inspection. Moisture and contamination may build up inside the fork depending on the severity of riding conditions. To maintain top performance it is recommended that the fork be periodically disassembled, cleaned, dried and re-greased using the grease ports located on the back of each outer leg. Figure 4

IMPORTANT: When filling the fork with grease through the grease ports it is important to note the grease is being forced between the upper and lower bushing. If the area is overfilled the force of the grease may force the upper bushing and dust seal out.

IMPORTANT: Before every ride you should:
1. Ensure that quick release skewers are properly adjusted and tight.
2. Wipe the inner legs clean & check entire fork for any obvious damage.
3. Check headset slack.
4. Insure that the front brake cable is properly seated in the cable retainer & check brake adjustment

IMPORTANT: Maintaining the proper oil level in your TPC is critical. 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 and unsafe riding condition. Finish reading this entire section prior to making any changes to the oil level.

To check the oil level remove only the compression assembly located in the top of the left leg. Leave the right side compression stack (adjuster, MCU, spring assembly) in place to keep the fork fully extended. Use a tape measure or "dip stick" to determine the oil level. Oil level should be between 3.50" (90mm) and 5.75" (146mm) below the top of the crown where the damping assembly screws in. For all SX models with Lok-out the oil level should be between 3.75" (95mm) and 4.25" (1.08mm). The recommended starting oil level is 4.00" (101mm). Use SAE 5WT for oil. (See Figure 5.)

ADJUSTING RIDE QUALITIES

SX TPC forks offer a wide adjustment range to suit individual riding preference and rider weight by simply changing the MicroCellular Elastomer (MCU's). Fine tune adjustments can be made using the preload adjusters located on top of the fork crown. Softer blue Elastomer, and harder yellow Elastomer are available from your Dealer.

NOTE: Since 98 and 99 SX model forks use a compression stack in the right leg only, MCU's and Springs used in previous Manitou forks are NOT interchangeable with later versions of SX model Forks.

Compression Spring Fine Tuning: Figure 6

Fine tuning adjustments to the spring rate are made by rotating the adjuster knobs located on top of the crown. Note all 99 SX models use compression spring systems in the right leg

only. The right knob for all SX models is used to adjust preload. Rotating the knob clockwise will firm the ride, adding preload to the compression stack. Rotating the knob counter clockwise will soften the ride. Four full revolutions will take the adjuster from full soft to the extreme firm setting.

Compression Damping Fine Tuning: Figure 7
The 99 SX-E has TPC sport which is not adjustable. To adjust the compression damping for the SX remove the compression damping assembly from the top of the left leg. Adjust the set screw (see exploded view), located in the valve seat, in to increase compression damping and out to reduce the compression damping. Try adjusting one full turn at a time. To adjust the SX R, SX-Ti, and SX Carbon simply rotate the compression damping knob located on top of the left leg and crown. Rotating the knob clockwise will increase damping, rotating the knob counter clockwise will reduce the damping. Excessive damping will give you a harsh ride over sharp bumps like rocky sections, but will feel good on large hits like G-outs. Insufficient compression damping will bottom out in the large hit G-outs and bob a little while climbing, but feel plush on the sharp hits. A correctly adjusted fork will perform good in all conditions.

Rebound Damping Fine Tuning: Figure 8
The 99 SX-E has TPC sport which is not adjustable. To adjust the SX, SXR, SX Ti, and SX Carbon simply rotate the rebound damping knob located on the bottom of the left leg. Rotating the knob clockwise will increase the damping, rotating the knob counter clockwise will reduce the damping. Excessive damping will give you a harsh ride over repetitive bumps (like breaking bumps) because the fork will pack up. Insufficient rebound damping will make the fork over active and top out. We suggest that you try adjusting your fork on the very active side, or minimum rebound. Then try it over a variety of terrain and tune in more rebound from there.

Figures 9, 10, 11, 12, 13 are schematics of the SX-E, SX. SXR, SX Ti, and SX Carbon Ti fork models.

Lok-Out System Kit P/N 85-3734 Figure 14
Lok-Outs are available for all SX models. By turning the knob _ turn CCW ,exposing the green sticker, the front fork will have regular TPC suspension. By turning the knob _ turn CW, exposing the red sticker, the fork will be locked out. A safety blow off valve will open under extreme conditions to allow some movement. To adjust the compression damping when not using the Lok-Out. Remove the compression damping assembly from the top of the left leg. Adjust the set screw (see exploded view), located in the valve seat, in to increase the damping and out to reduce the compression damping. Try adjusting one _ turn at a time.