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ANSWER PRECISION SUSPENSION

CONGRATULATIONS FOR CHOOSING THE LATEST STATE OF THE ART MOUNTAIN BIKE SUSPENSION FORK AVAILABLE. THE 1999 X-VERT FORK MODELS HAVE STATE OF THE ART MCU/SPRING COMPRESSION SYSTEMS. THE X-VERT SERIES USE THE NEW TWIN PISTON CARTRIDGE SYSTEM (TPC) THAT SURPASS ALL OTHER TYPES OF OIL DAMPED SYSTEM IN PERFORMANCE AND DURABILITY. XVERT-T, X-VERT-R AND X-VERT-TI MODELS ARE EQUIPED WITH DUAL TRIPLE CLAMPS FOR EXTRA RIDIDITY. THE X-VERT-TI USES THE 20MM X 120MM OVERSIZE THROUGH AXLE AND IS COMPATIBLE WITH STANDARD DH HUBS.

Your X-VERT Fork is fully assembled and ready to be installed onto your bicycle and comes equipped with a 1 1/8" threadless steer tube. X-VERT'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 X-VERT 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 or would like to purchase reflector bracket kit (P/N 85-3674) 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. Press fit inner legs are stiffer and have longer fatigue life vs bolt in inner legs. 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 X-VERT 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 X-VERT. 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 X-VERT 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. Position the X-VERT-T, X-VERT-R AND X-VERT-TI steering stop bumpers to prevent frame damage.
12. For all X-VERTS except X-VERT-TI 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.
13. For the X-VERT-TI lightly pinch the thread axle sleeve in the left dropout. Install the through axle and hub. Tighten the axle until it bottoms, 60-90 in-lbs (6.8-5.6Nm). Slide the right leg in and out on the axle to find the center position and torque the right dropout pinch bolts to 30-50 in-lb (3.4-5.6 Nm). See Figure 2
14. Install brake cable per manufacturers instructions:

Note: ***99 X-VERT, X-VERT-E, X-VERT-T AND X-VERT-R Forks are equipped with a secondary catch dropout. The X-VERT-TI is equipped with oversize 20mm through axle that is compatible with standard DH 20x110mm hubs.***

Note: ***99 X-VERT, X-VERT-E, X-VERT-T AND X-VERT-R forks 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 3

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:
3.15" (80mm) for 80mm travel forks
3.94" (100mm) for 100 mm travel forks
4.53" (115mm) for 115mm travel forks
6.30" (160mm) for 160mm travel forks
Any less clearance can result in serious injury or death. Figure 4

MAINTENANCE

IMPORTANT: The X-VERT 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 X-VERT 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 X-VERT 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 Microlube grease ports located on the back of each outer leg. Figure 5

IMPORTANT: When lubricating the fork with grease through the grease ports it is important to note the grease is being forced between the upper and lower bushings. 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. (Left leg only) 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 per following table. (See Figure 6.)

OIL Level

Fork Model	Minimum	Maximum	Recommended
X-VERT	3.5”(89MM)	4.5”(114MM)	3.0”(76MM)
X-VERT-E	3.5”(89MM)	4.5”(114MM)	3.0”(76MM)
X-VERT-T	8.0”(203MM)	10.0”(254MM)	9.0”(229MM)
X-VERT-R	7.0”(178MM)	9.0”(228MM)	8.0”(203MM)
X-VERT-TI	7.0”(178MM)	9.0”(228MM)	8.0”(203MM)

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

ADJUSTING RIDE QUALITIES

X-VERT 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 X-VERT model forks use a compression stack in the right leg only, MCU’s and Springs used inPre 98 model Manitou forks are NOT interchangeable with later versions of Manitou Forks.

Compression Spring Fine Tuning: Figure 7

Fine tuning adjustments to the spring rate are made by rotating the adjuster knobs located on top of the crown. Note all 99 X-VERT models use compression spring systems in the right leg only. The right knob for all X-VERT 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 8

The 99 X-VERT-T has TPC sport which is not adjustable, other than by changing oil viscosity to 2.5wt for lighter damping or 7.5wt for harder damping. To adjust the X-VERT,X-VERT-R and X-VERT-TI 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 X-VERT-T has TPC sport which is not adjustable. To adjust the X-VERT, X-VERT-R and X-VERT-TI 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 10, 11, 12, 13, 14 are schematics of the X-VERT, X-VERT-E, X-VERT-T, X-VERT-R AND X-VERT-TI fork models.