

2000 X-VERT OWNER'S MANUAL

- 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**



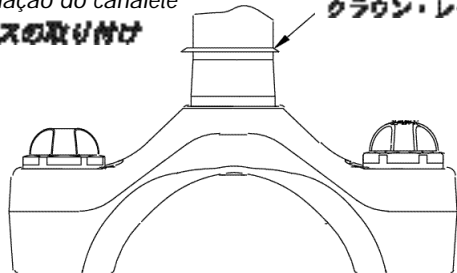
Answer Products

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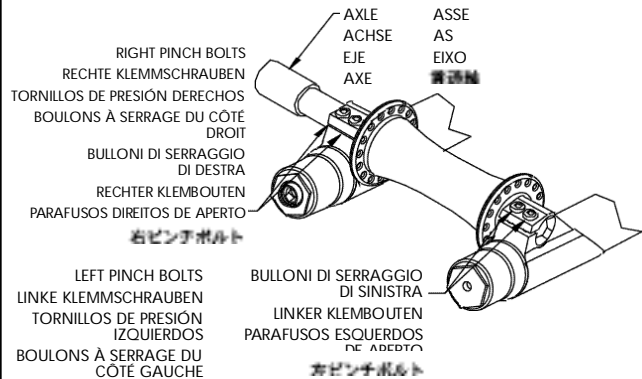
Race Installation
 Einbau des Steuersatzrings
 Instalación de la arandela
 Installation du jeu de direction
 Montaggio dell'anello della testa
 Installatie van loopring
 Instalação do canaleta
レースの取り付け

CROWN RACE
 GABELBRÜCKEN-
 STEUERSATZRING
 ARANDELA DE LA DIREC-
 CION
 CONE DE JEU DE DIREC-
 TION
 ANELLO DELLA TESTA
 KROONLOOPRING
 CANALITE DA COROA
クラウン・レース



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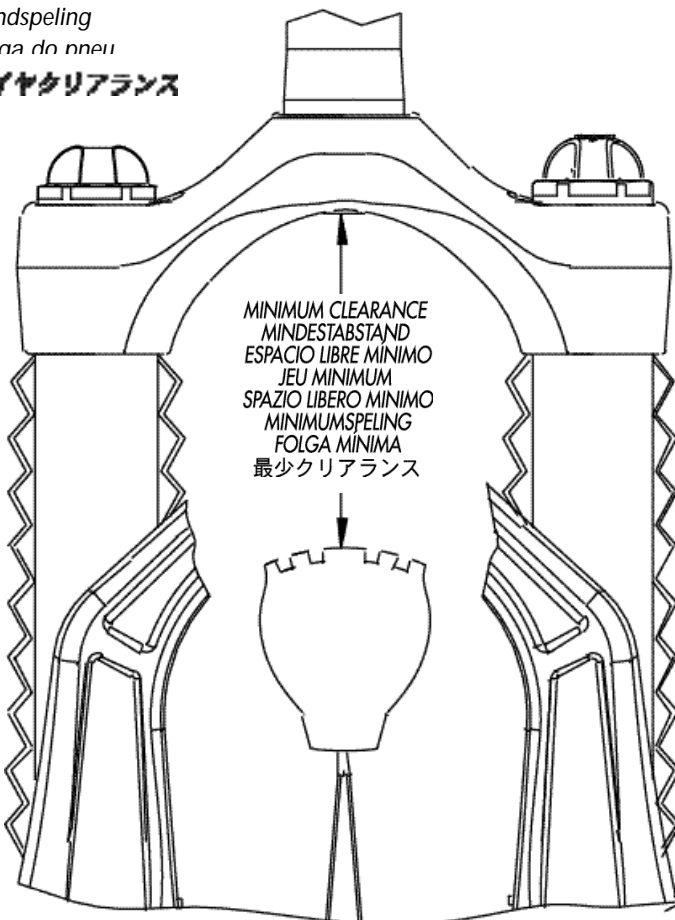
Axle and hub installation
 Einbau der Achse und Nabe
 Instalación del eje y buje
 Installation de l'axe et
 du moyeu
 Montaggio dell'asse e
 del mozzo
 Instalação do eixo e do
 cubo
直通軸とハブの取り付け



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

MINIMUM CLEARANCE
 MINDESTABSTAND
 ESPACIO LIBRE MÍNIMO
 JEU MINIMUM
 SPAZIO LIBERO MINIMO
 MINIMUMSPELING
 FOLGA MÍNIMA
最少クリアランス



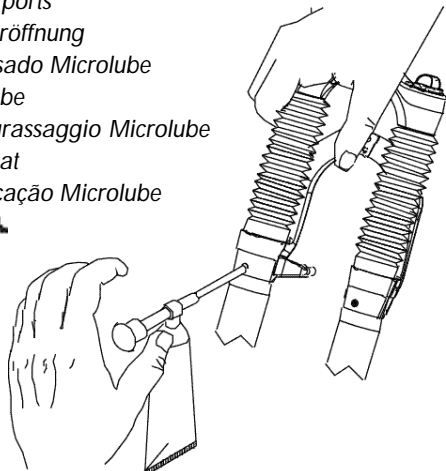
FORK MODEL
 GABELMODELL
 MODELO DE HORQUILLA
 MODELE DE FOURCHE
 MODELLO DI FORCELLA
 VORKMODEL
 MODELO DO GARFO
フォーク・モデル

MINIMUM CLEARANCE
 MINDESTABSTAND
 ESPACIO LIBRE MÍNIMO
 JEU MINIMUM
 SPAZIO LIBERO MINIMO
 MINIMUMSPELING
 FOLGA MÍNIMA
最少クリアランス

105 mm travel forks	4.14" (105 mm)
120 mm travel forks	4.73" (120 mm)
180 mm travel forks	7.10" (180 mm)
Gabel mit 105 mm Auslenkung	105 mm
Gabel mit 120 mm Auslenkung	120 mm
Gabel mit 180 mm Auslenkung	180 mm
Horquillas con recorrido de 105 mm	105 mm
Horquillas con recorrido de 120 mm	120 mm
Horquillas con recorrido de 180 mm	180 mm
Fourches ayant une course de 105 mm	105 mm
Fourches ayant une course de 120 mm	120 mm
Fourches ayant une course de 180 mm	180 mm
Forcelle con corsa da 105 mm	105 mm
Forcelle con corsa da 120 mm	120 mm
Forcelle con corsa da 180 mm	180 mm
Loop van 105 mm	105 mm
Loop van 120 mm	120 mm
Loop van 180 mm	180 mm
Curso de 105 mm	105 mm
Curso de 120 mm	120 mm
Curso de 180 mm	180 mm
105 mm 曲程	105 mm (4.14")
120 mm 曲程	120 mm (4.73")
180 mm 曲程	180 mm (7.10")

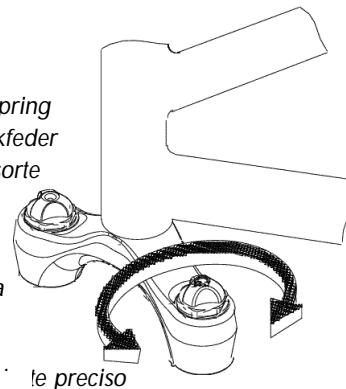
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Microlube grease ports
 Microlube Schmieröffnung
 Orificio de engrasado Microlube
 Graisseur Microlube
 Apertura per l'ingrassaggio Microlube
 Microlube smeergat
 Orificio de lubrificação Microlube
グリース・ポート



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Fine tuning compression spring
 Feinabstimmung der Druckfeder
 Ajustes de precisión al resorte de compresión
 Réglages fins des ressorts de compression
 Messa a punto della molla di compressione
 Fijnafstelling van drukveer



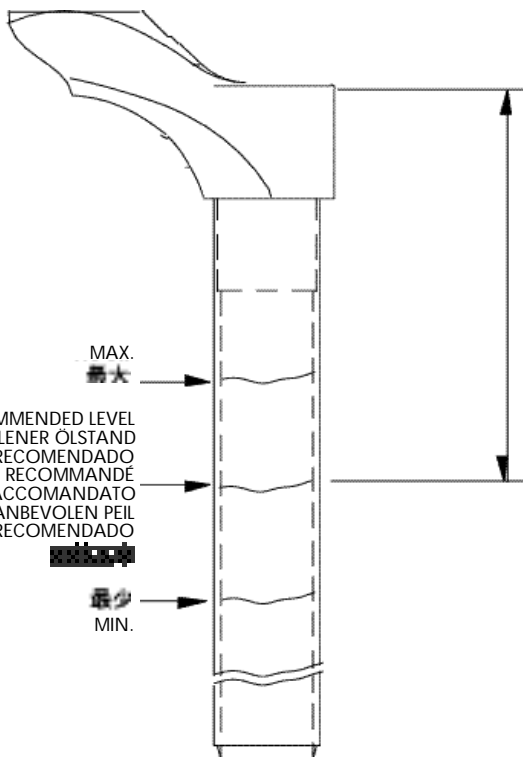
圧縮スプリングの微調整

te preciso

ROTATE RUOTARE
 DREHEN DRAAIEN
 GIRAR GIRAR
 TOURNER **回す**

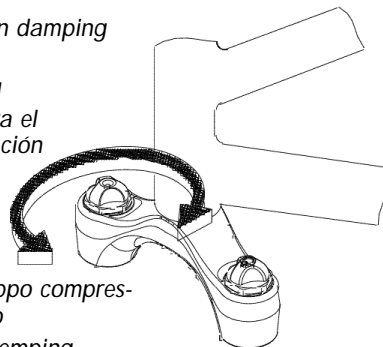
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Oil level
 Ölstand
 Nivel del aceite
 Niveau d'huile
 Livello dell'olio
 Oliepeil
 Nível do óleo
オイルの量



7

Fine tuning compression damping
 Feinabstimmung der Druckstufendämpfung
 Ajuste de precisión para el sistema de amortiguación de compresión
 Réglages fins de l'amortissement de la compression
 Messa a punto del gruppo compressione di smorzamento
 Fijnafstelling van drukdemping
 Ajuste de precisão do amortecimento de compressão

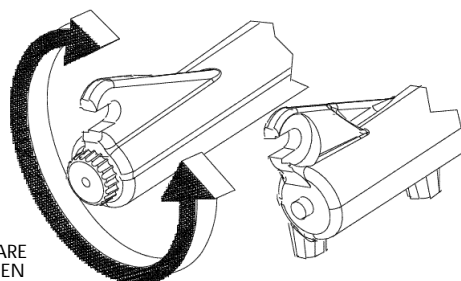


コンプレッション・ダンピングの微調整

ROTATE RUOTARE
 DREHEN DRAAIEN
 GIRAR GIRAR
 TOURNER **回す**

8

Fine tuning rebound damping
 Feinabstimmung der Zugstufendämpfung
 Ajuste de precisión para la amortiguación de rebotes
 Réglages fins de l'amortissement de la détente
 Messa a punto dello smorzamento all'estensione
 Fijnafstelling van terugveringdemping
 Ajuste de precisão do ressalto de amortecimento



ROTATE RUOTARE
 DREHEN DRAAIEN
 GIRAR GIRAR
 TOURNER **回す**

ANSWER PRECISION SUSPENSION

CONGRATULATIONS FOR CHOOSING THE LATEST STATE-OF-THE-ART MOUNTAIN BIKE SUSPENSION FORK AVAILABLE. THE 2000 X-VERT FORK MODELS HAVE A STATE-OF-THE-ART MCU/SPRING COMPRESSION SYSTEM. THE X-VERT SERIES USES THE TWIN PISTON CARTRIDGE SYSTEM (TPC) THAT SURPASSES ALL OTHER TYPES OF OIL-DAMPED SYSTEMS IN PERFORMANCE AND DURABILITY. THE X-VERT DC AND X-VERT CARBON ARE EQUIPPED WITH DUAL TRIPLE CLAMPS FOR EXTRA RIGIDITY. THE X-VERT CARBON USES THE 20 MM X 120 MM 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-VERTs 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 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 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 have higher performance 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 you suspect may be damaged. Contact your dealer or Answer Products Technical Support, (661) 257-4411, if you have any questions concerning the integrity or condition of your fork. Answer Products recommends that you periodically inspect your fork for wear and damage.
5. Answer Products recommends that you periodically inspect your fork for wear and damage. Inspect the crown, inner legs, 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.

INSTALLATION 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 manufacturer's instructions.
11. Position the X-VERT DC and X-VERT CARBON steering stop bumpers to prevent frame damage.
12. For all X-VERTs except the X-VERT CARBON adjust 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. 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 manufacturer's specifications.
13. For the X-VERT CARBON 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. (6.8-10.2 Nm). 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-lbs. (3.4-5.6 Nm). See Figure 2.
14. Install brake cable per manufacturer's instructions.

NOTE: 2000 X-VERT, X-VERT DC and X-VERT SUPER forks are equipped with a secondary catch dropout. The X-VERT CARBON is equipped with an oversize 20 mm through axle that is compatible with standard DH 20x110 mm hubs.

! 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" (80 MM) FOR 80 MM TRAVEL FORKS
3.94" (100 MM) FOR 100 MM TRAVEL FORKS
4.53" (115 MM) FOR 115 MM TRAVEL FORKS
6.30" (160 MM) FOR 160 MM TRAVEL FORKS
ANY LESS CLEARANCE CAN RESULT IN SERIOUS INJURY OR DEATH. (FIGURE 3)

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 (except for the X-VERT CARBON) 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 4)

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 and 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 and check brake adjustment.

IMPORTANT: Maintaining the proper oil level in your TPC is critical (right 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 an 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 right leg. Leave the left 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. Refer to the following table for the correct oil level for your fork model. (See Figure 5.)

OIL LEVEL			
Fork Model	Minimum	Maximum	Recommended
X-VERT	3.00" (76.2 mm)	3.25" (82.5 mm)	3.125" (79.3 mm)
X-VERT DC	9.00" (229 mm)	11.00" (279 mm)	10.00" (254 mm)
X-VERT SUPER	3.00" (76.2 mm)	3.25" (82.5 mm)	3.125" (79.3 mm)
X-VERT CARBON	7.50" (190 mm)	9.50" (241 mm)	8.50" (216 mm)

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 pre-load adjusters located on top of the fork crown. Softer blue and harder yellow elastomers are available from your dealer.

NOTE: The 98 and 99 X-VERT model forks use a compression stack in the right leg only; the 2000 models' compression stack is in the left leg. MCUs and springs used in pre-98 model Manitou forks are NOT interchangeable with later versions of Manitou 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 2000 X-VERT models use compression spring systems in the left leg only. The left 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 7

To adjust the X-VERT forks simply rotate the compression damping knob located on top of the right 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 well in all conditions.

Rebound Damping Fine Tuning: Figure 8

To adjust the X-VERT forks simply rotate the rebound damping knob located on the bottom of the right 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 terrains and tune in more rebound from there.

Figures 9, 10, 11 and 12 are schematics of the X-VERT, X-VERT DC, X-VERT SUPER, and X-VERT CARBON fork models. ■

BUSHING & SEAL DETAIL

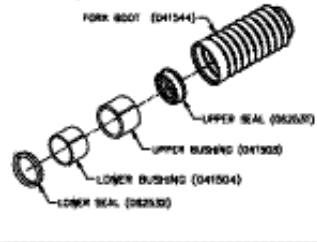
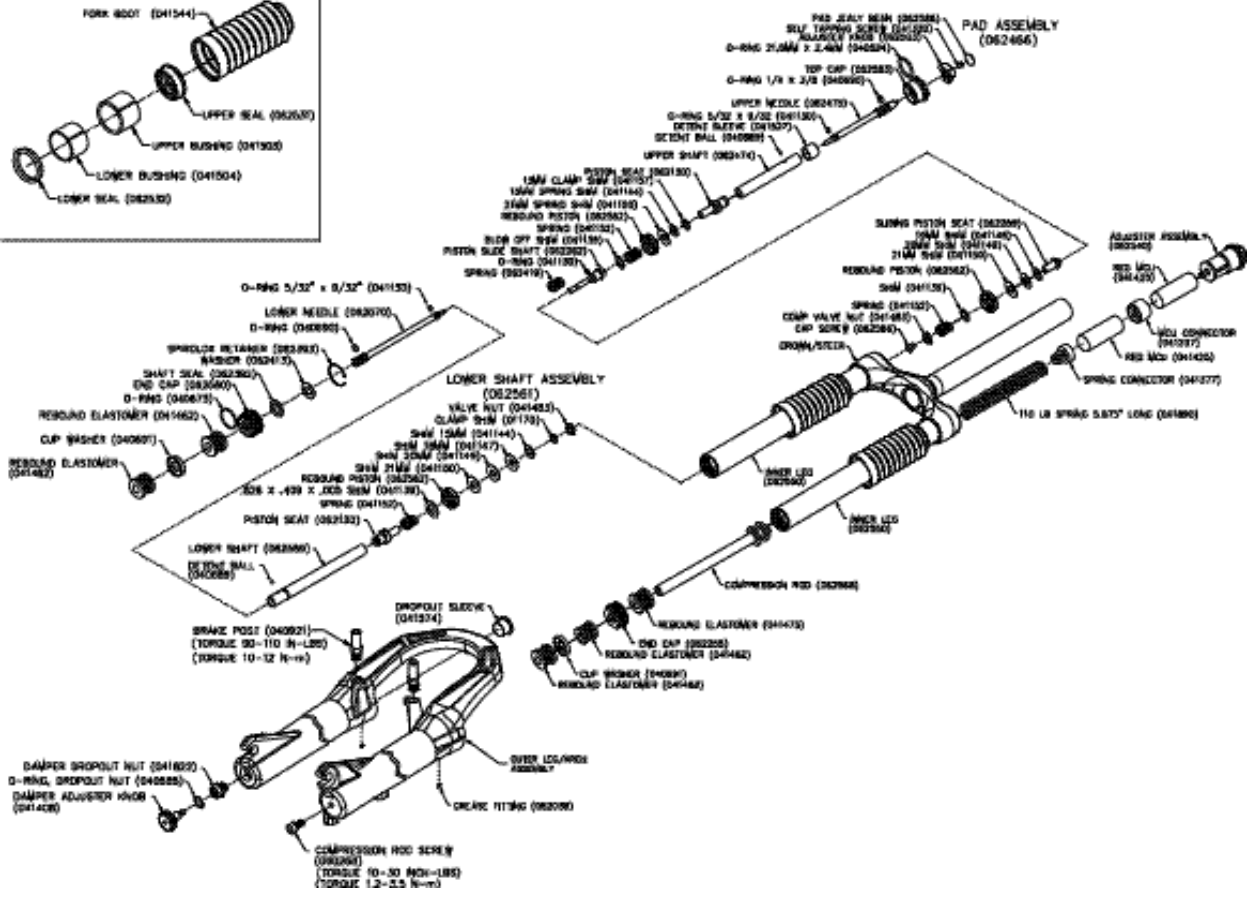


FIGURE 9: 2000 X-VERT FORK SCHEMATIC



BUSHING & SEAL DETAIL

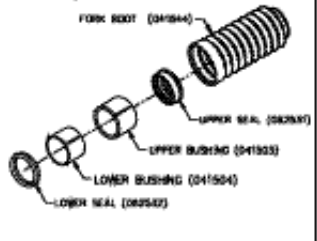


FIGURE 10: 2000 X-VERT DC SMALL & LARGE FORK SCHEMATIC

