p/n: 062491
2000 SX

2000 SX

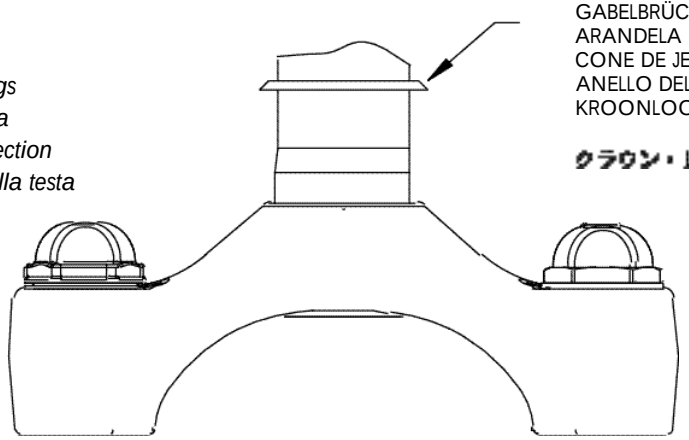
OWNER'S MANUAL

• 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
28209 Avenue Stanford, Valencia, California 91355-3984
Phone: 661.257.4411 • Sales Fax: 661.294.4179

1

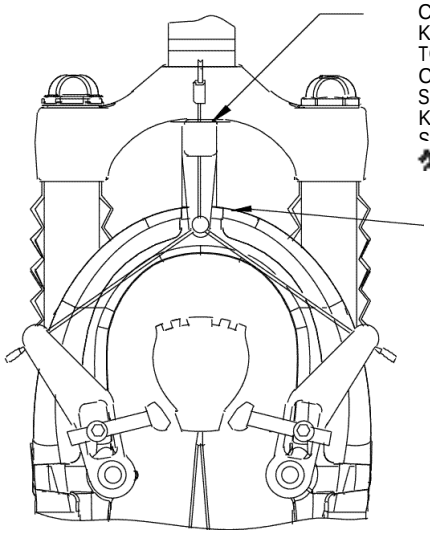
Race Installation
Einbau des Steuersatzrings
Instalación de la arandela
Installation du jeu de direction
Montaggio dell'anello della testa
Installatie van loopring
Instalação do canalete
レースの取り付け



CROWN RACE
GABELBRÜCKEN-STEUERSATZRING
ARANDELA DE LA DIRECCIÓN
CONE DE JEU DE DIRECTION
ANELLO DELLA TESTA
KROONLOOPRING
)ROA
クラウン・レース

2

Brake cable routing
Bremskabelführung
Trayectoria del cable del freno
Disposition du câble de frein
Montaggio del cavo del freno
Remkabelroutering
Percurso do cabo de freio
ブレーキ・ケーブルの経路

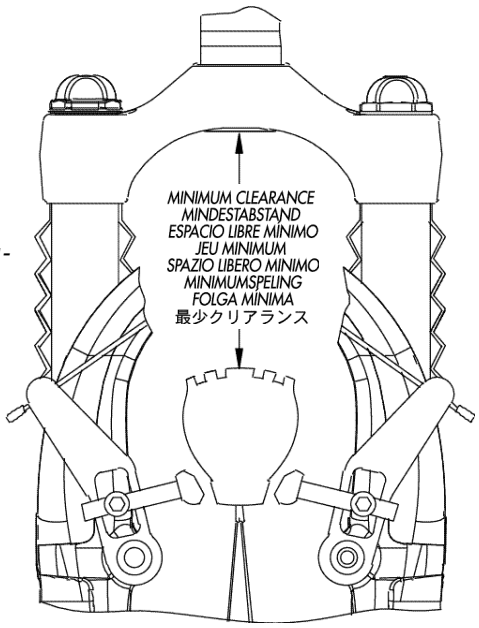


CABLE HANGER
KABELHALTER
TOPE DEL CABLE
CROCHET DE SUSPENSION DE CÂBLE
SOSTEGNO PER IL CAVO
KABELHANGER
SUPORTE DO CABO
ケーブル・ハンガー

BRAKE ARCH
BREMSBRÜCKE
ARCO DEL FRENO
ARCEAU
ARCHETTO DEL FRENO
REMBOOG
ARCO DO FREIO
ブレーキ・アーチ

3

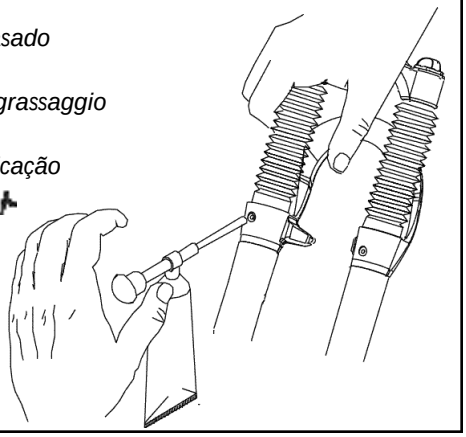
Tire clearance
Reifenabstand
Espacio libre de la cubierta
Distance arceau/pneu
Spazio libero del pneumatico
Bandspeling
Folga do pneu
タイヤクリアランス



FORK MODEL GABELMODELL MODELO DE HORQUILLA MODÈLE 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**
80 mm travel forks	3.2" (81 mm)
Gabel mit 80 mm Auslenkung	81 mm
Horquillas con recorrido de 80 mm	81 mm
Fourches ayant une course de 80 mm	81 mm
Forcelle con corsa da 80 mm	81 mm
Loop van 80 mm	81 mm
Curso de 80 mm	81 mm
80 mm 対応	81 mm

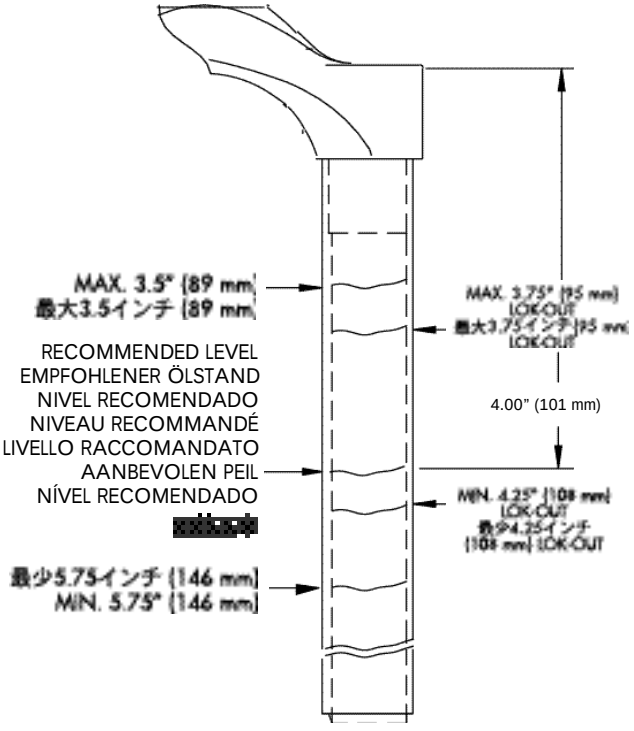
4

Grease port
Schmieröffnung
Orificio de engrasado
Graisseur
Apertura per l'ingrassaggio
Smeergat
Orifício de lubrificação
グリース・ポート



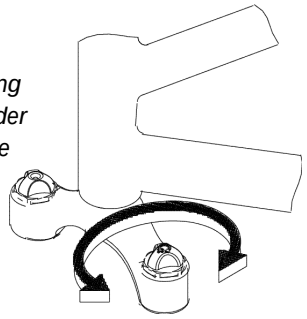
5

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



6

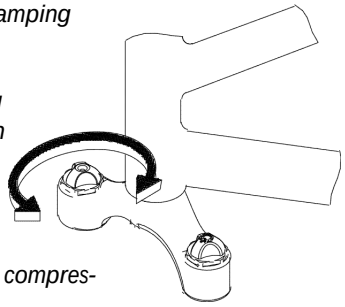
Fine tuning compression spring
Feinabstimmung der Druckfeder
Ajustes de precisión al resorte de compresión
Réglages fins des ressorts de compression
Messa a punto della molla di compressione
Fijnafstelling van drukveer
...te preciso
圧縮スプリングの微調整



ROTATE DREHEN GIRAR TOURNER
RUOTARE DRAAIEN GIRAR
回もす

7

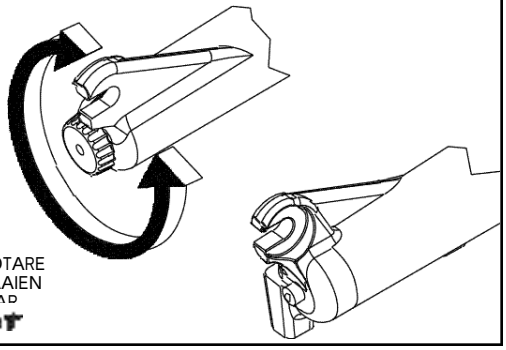
Fine tuning compression damping
Feinabstimmung der Druckstufendämpfung
Ajuste de precisión para el sistema de amortiguación de compresión
Réglages fins de l'amortissement de la compression
Messa a punto del gruppo compressione di smorzamento
Fijnafstelling van drukdemping
Ajuste de precisão do amortecimento de compressão
コンプレッション・ダンピングの微調整



ROTATE DREHEN GIRAR TOURNER
RUOTARE DRAAIEN GIRAR
回もす

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
リバウンド・ダンピングの微調整



ROTATE DREHEN GIRAR TOURNER
RUOTARE DRAAIEN GIRAR
回もす

ANSWER PRECISION SUSPENSION

CONGRATULATIONS FOR CHOOSING THE LATEST STATE-OF-THE-ART MOUNTAIN BIKE SUSPENSION FORK AVAILABLE. THE 2000 SX MODELS USE THE LATEST ONE-PIECE OUTER LEG/ARCH TECHNOLOGY. BOTH HAVE STATE-OF-THE-ART MCU/SPRING COMPRESSION SYSTEMS. THE SX SERIES USES THE NEW TWIN PISTON CARTRIDGE SYSTEM (TPC) THAT SURPASSES ALL OTHER TYPES OF OIL-DAMPED SYSTEMS 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 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 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, (661) 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, 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 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 manufacturer's instructions.
11. 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 specification.
12. Install brake cable per manufacturer's instructions.

NOTE: All 2000 SX forks are equipped with a secondary catch dropout.

NOTE: The SX fork comes equipped with a hangerless arch. Brake cable hangers that attach to the arch are available through your dealer. Part number 85-3800, 2000 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: 3.20" (81 MM) FOR 80 MM 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 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. 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. Oil level should be between 3.50" and 5.75" (89 mm and 146 mm) 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" and 4.25" (95 mm and 108 mm). The recommended starting oil level is 4.00” (101 mm). Use SAE 5WT fork 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 and harder yellow elastomers are available from your dealer.

NOTE: The 98 and 99 SX model forks use a compression stack in the right leg only; the 2000 model’s compression stack is in the left leg. MCU’s 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 SX models use a compression spring system in the left leg only. The left knob for all SX forks 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 2000 SX LT and SX have TPC sport which is not adjustable.
To adjust the SX R simply rotate the compression damping knob located on top of the right leg and crown. 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 sharp bumps like rocky sections, but will feel good in 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.

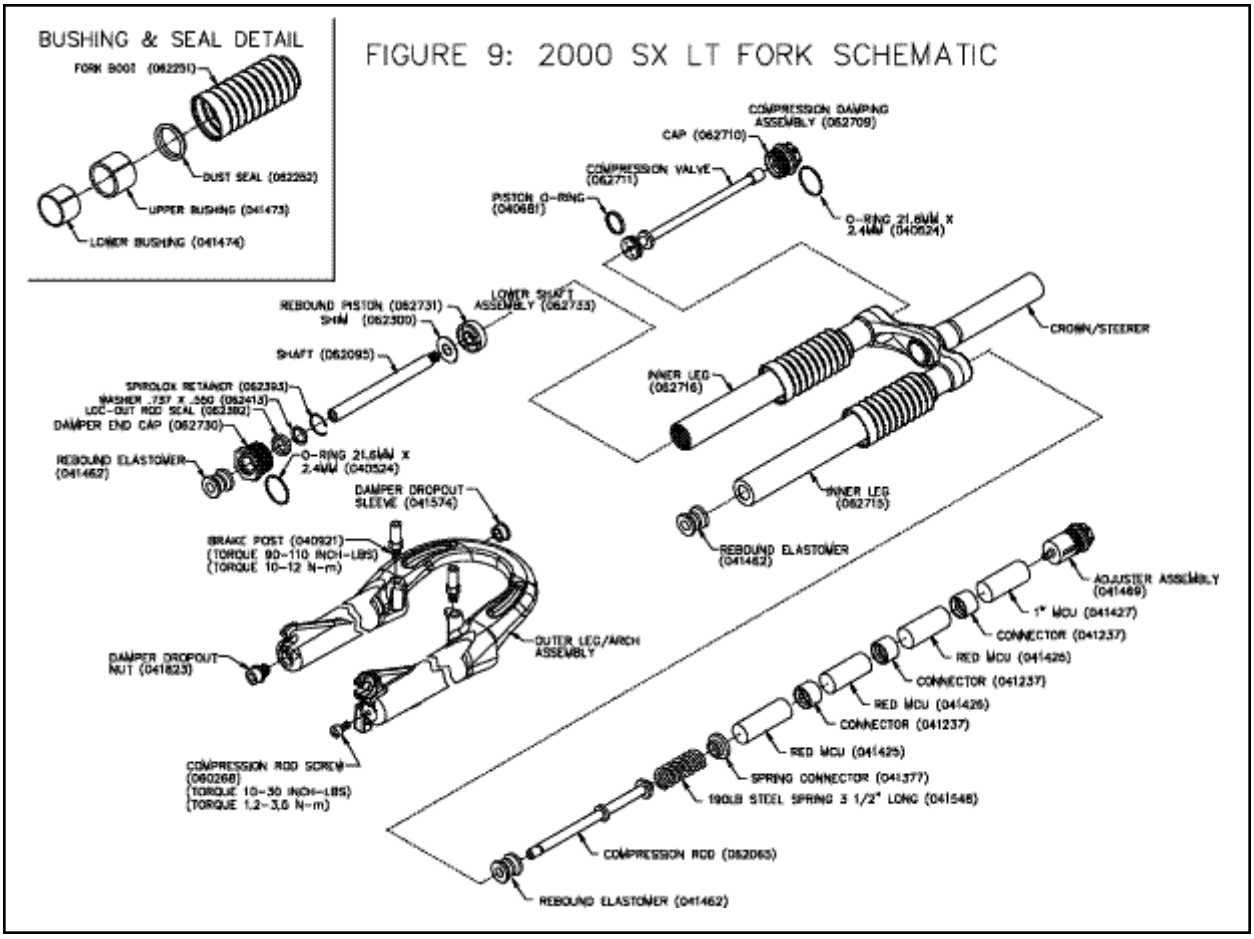
Rebound Damping Fine Tuning: Figure 8

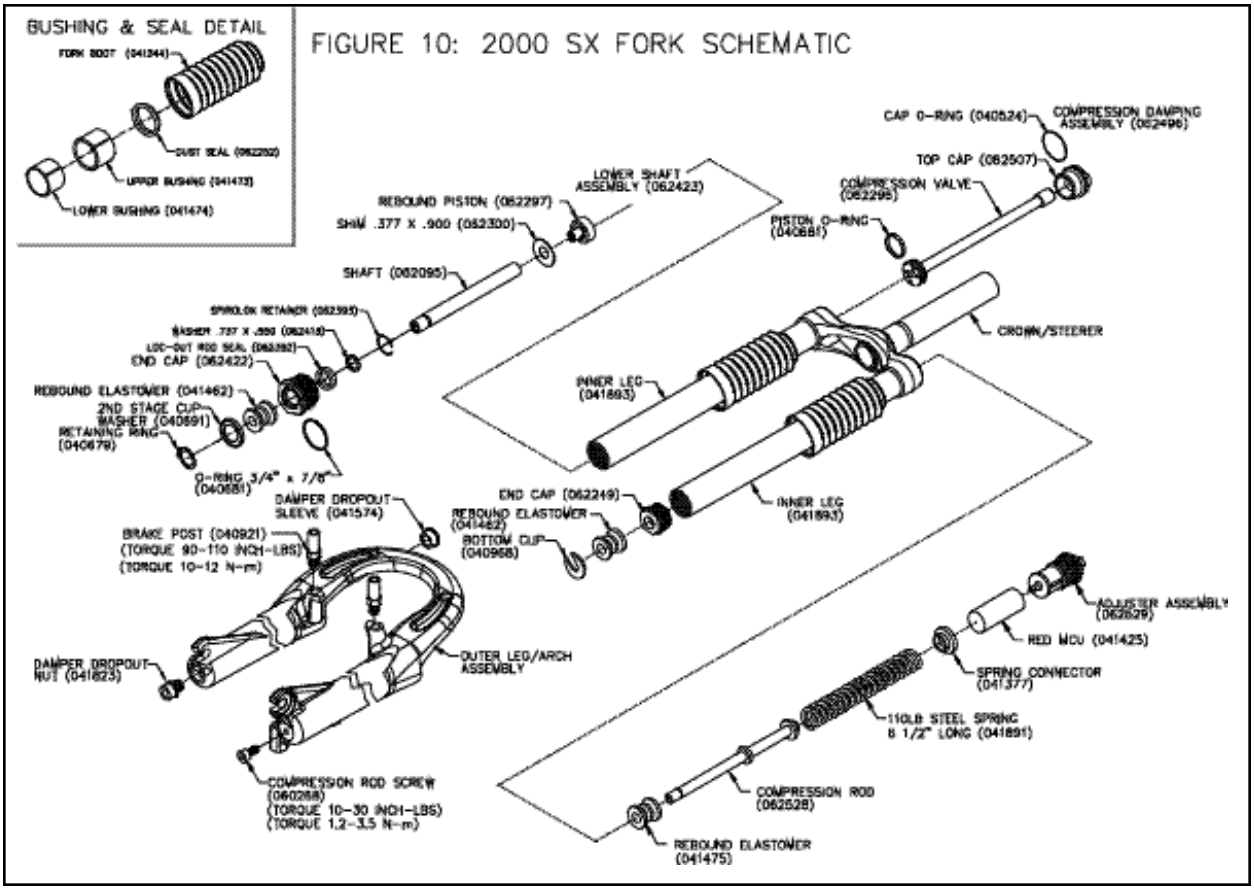
The 2000 SX LT and SX have TPC sport which is not adjustable. To adjust the SX R simply rotate the rebound damping knob located on the bottom of the right leg. Rotating the knob clockwise will increase the damping, rotating the knob counter-clockwise will reduce the damping. Excessive damping will give 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 terrain and tune in more rebound from there.

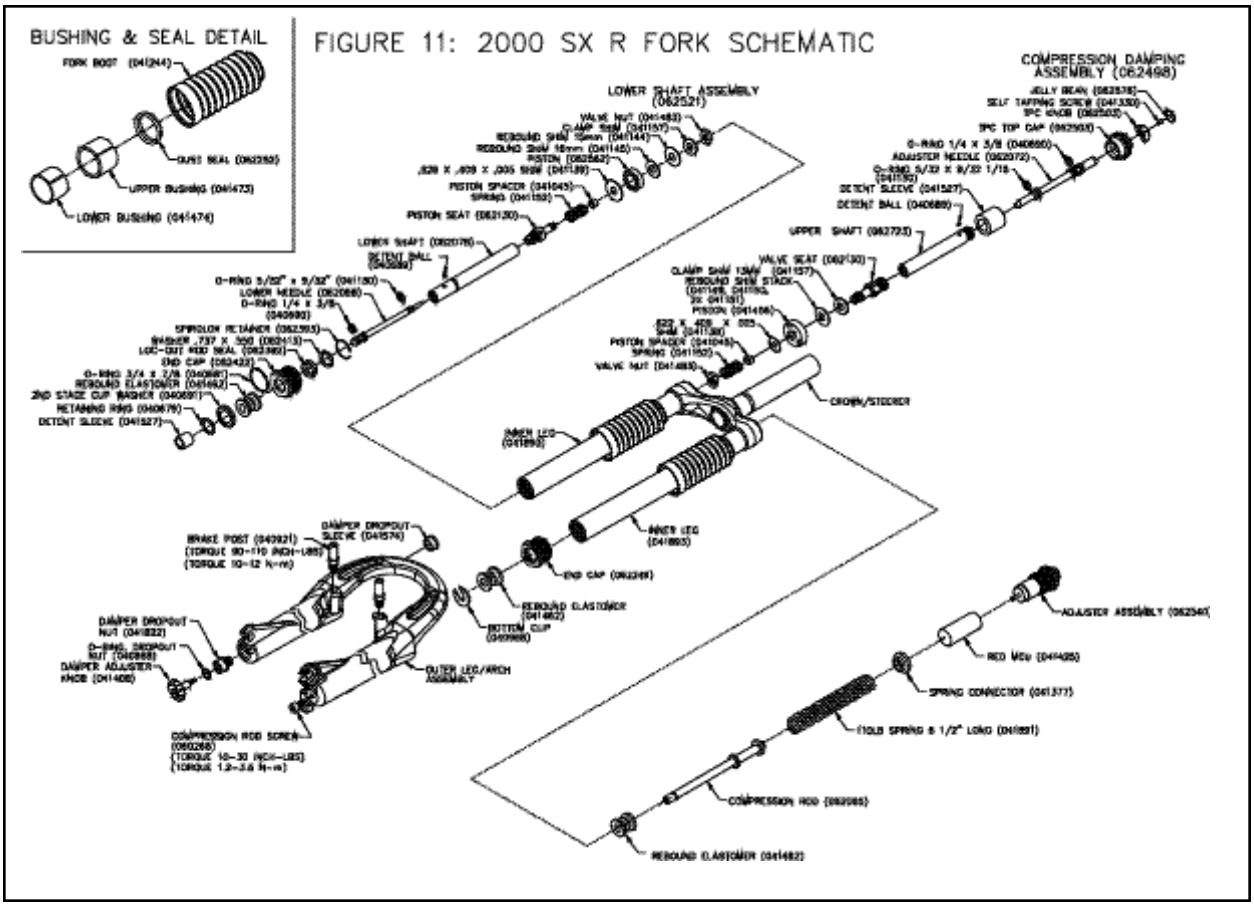
Figures 9, 10 and 11 are schematics of the SX LT, SX and SX R fork models.

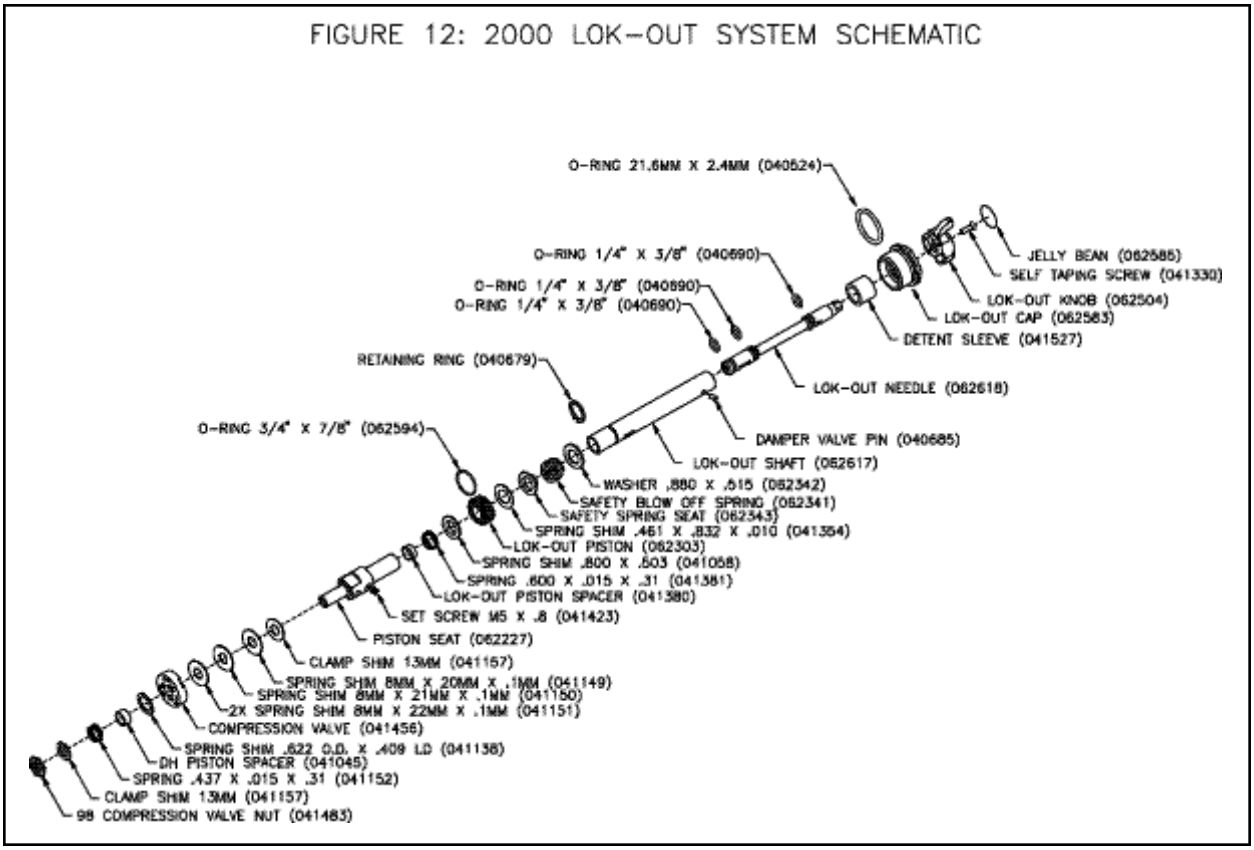
Lok-Out System Kit P/N 85-8989: Figure 12

Lok-Outs are available for all SX models. By turning the knob 1/4turn counter-clockwise, exposing the green sticker, the front fork will have regular TPC suspension. By turning the knob 1/4 turn clockwise, 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 right leg. Adjust the setscrew (see exploded view), located in the valve seat, in to increase the damping and out to reduce the compression damping. Try adjusting 1/2 turn at a time. ■


BUSHING & SEAL DETAIL
FORK BOOT (062251)
DUST SEAL (062252)
UPPER BUSHING (041473)
LOWER BUSHING (041474)
FIGURE 9: 2000 SX LT FORK SCHEMATIC
COMPRESSION DAMPING ASSEMBLY (062709)
CAP (062710)
COMPRESSION VALVE (062711)
PISTON O-RING (040681)
O-RING 21.6MM X 2.4MM (040524)
REBOUND PISTON (062731)
SHIM (062300)
LOWER SHAFT ASSEMBLY (062733)
SHAFT (062095)
CROWN/STEERER
INNER LEG (062716)
SPIROLOK RETAINER (062393)
WASHER .737 X .550 (062415)
LOC-OUT ROD SEAL (062392)
DAMPER END CAP (062730)
REBOUND ELASTOMER (041462)
O-RING 21.6MM X 2.4MM (040524)
INNER LEG (062715)
DAMPER DROPOUT SLEEVE (041574)
BRAKE POST (040921) (TORQUE 90-110 INCH-LBS) (TORQUE 10-12 N-m)
REBOUND ELASTOMER (041462)
ADJUSTER ASSEMBLY (041469)
1" MCU (041427)
CONNECTOR (041237)
RED MCU (041426)
CONNECTOR (041237)
RED MCU (041426)
CONNECTOR (041237)
RED MCU (041426)
SPRING CONNECTOR (041377)
190LB STEEL SPRING 3 1/2" LONG (041548)
DAMPER DROPOUT NUT (041823)
OUTER LEG/ARCH ASSEMBLY
COMPRESSION ROD SCREW (060268) (TORQUE 10-30 INCH-LBS) (TORQUE 1.2-3.5 N-m)
COMPRESSION ROD (062063)
REBOUND ELASTOMER (041462)


BUSHING & SEAL DETAIL
FORK BOOT (041244)
DUST SEAL (062252)
UPPER BUSHING (041473)
LOWER BUSHING (041474)
FIGURE 10: 2000 SX FORK SCHEMATIC
CAP O-RING (040524)
COMPRESSION DAMPING ASSEMBLY (062498)
TOP CAP (062507)
COMPRESSION VALVE (062295)
PISTON O-RING (040681)
LOWER SHAFT ASSEMBLY (062423)
REBOUND PISTON (062297)
SHIM .377 X .900 (062300)
SHAFT (062095)
SPIROLOK RETAINER (062393)
WASHER .737 X .550 (062415)
LOC-OUT ROD SEAL (062392)
END CAP (062422)
CROWN/STEERER
INNER LEG (041893)
REBOUND ELASTOMER (041462)
2ND STAGE CUP WASHER (040691)
RETAINING RING (040679)
O-RING 3/4" x 7/8" (040681)
END CAP (062249)
REBOUND ELASTOMER (041462)
BOTTOM CUP (040968)
INNER LEG (041893)
DAMPER DROPOUT SLEEVE (041574)
BRAKE POST (040921) (TORQUE 90-110 INCH-LBS) (TORQUE 10-12 N-m)
ADJUSTER ASSEMBLY (062529)
RED MCU (041425)
SPRING CONNECTOR (041377)
110LB STEEL SPRING 8 1/2" LONG (041891)
DAMPER DROPOUT NUT (041823)
OUTER LEG/ARCH ASSEMBLY
COMPRESSION ROD SCREW (060268) (TORQUE 10-30 INCH-LBS) (TORQUE 1.2-3.5 N-m)
COMPRESSION ROD (062528)
REBOUND ELASTOMER (041475)


BUSHING & SEAL DETAIL
FORK BOOT (041244)
DUST SEAL (062350)
UPPER BUSHING (041475)
LOWER BUSHING (041474)
FIGURE 11: 2000 SX R FORK SCHEMATIC
COMPRESSION DAMPING ASSEMBLY (062498)
LOWER SHAFT ASSEMBLY (062521)
UPPER SHAFT (062723)
CROWN/STEERER
INNER LEG (041893)
OUTER LEG/ARCH ASSEMBLY
END CAP (062349)
REBOUND ELASTOMER (041462)
BOTTOM CUP (040988)
BRAKE POST (040921)
DAMPER DROPOUT SLEEVE (041574)
DAMPER DROPOUT NUT (041822)
DAMPER ADJUSTER KNOB (041408)
COMPRESSION ROD SCREW (060268)
ADJUSTER ASSEMBLY (062540)
ROD MOU (041425)
SPRING CONNECTOR (041377)
11OLB SPRING 8 1/2" LONG (041891)
COMPRESSION ROD (062585)
REBOUND ELASTOMER (041462)


FIGURE 12: 2000 LOK-OUT SYSTEM SCHEMATIC
O-RING 21.6MM X 2.4MM (040524)
O-RING 1/4" X 3/8" (040690)
O-RING 1/4" X 3/8" (040690)
O-RING 1/4" X 3/8" (040690)
JELLY BEAN (062585)
SELF TAPING SCREW (041330)
LOK-OUT KNOB (062504)
LOK-OUT CAP (062583)
DETENT SLEEVE (041527)
RETAINING RING (040679)
LOK-OUT NEEDLE (062618)
O-RING 3/4" X 7/8" (062594)
DAMPER VALVE PIN (040685)
LOK-OUT SHAFT (062617)
WASHER .880 X .515 (062342)
SAFETY BLOW OFF SPRING (062341)
SAFETY SPRING SEAT (062343)
SPRING SHIM .461 X .832 X .010 (041354)
LOK-OUT PISTON (062303)
SPRING SHIM .800 X .503 (041058)
SPRING .600 X .015 X .31 (041381)
LOK-OUT PISTON SPACER (041380)
SET SCREW M5 X .8 (041423)
PISTON SEAT (062227)
CLAMP SHIM 13MM (041157)
SPRING SHIM 8MM X 20MM X .1MM (041149)
SPRING SHIM 8MM X 21MM X .1MM (041150)
2X SPRING SHIM 8MM X 22MM X .1MM (041151)
COMPRESSION VALVE (041456)
SPRING SHIM .622 O.D. X .409 I.D (041138)
DH PISTON SPACER (041045)
SPRING .437 X .015 X .31 (041152)
CLAMP SHIM 13MM (041157)
9B COMPRESSION VALVE NUT (041483)