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ANSWER PRECISION SUSPENSION

CONGRATULATIONS FOR CHOOSING THE LATEST STATE OF THE ART MOUNTAIN BIKE SUSPENSION FORK AVAILABLE. THE 1998 XVERT FORK MODELS HAVE STATE OF THE ART MCU/SPRING COMPRESSION SYSTEMS. THE XVERT SERIES ALL USE THE NEW TWIN PISTON CARTRIDGE SYSTEM (TPC) THAT SURPASSES ALL OTHER TYPES OF OIL DAMPED SYSTEM IN PERFORMANCE AND DURABILITY.

Your 98 XVERT Fork is fully assembled and ready to be installed onto your bicycle and comes equipped with a 1 1/8" threadless steer tube. 98 XVERT and XVERT R forks are available with the V-Brake cable hangerless arch.

CONSUMER SAFETY INFORMATION

IMPORTANT: The 98 XVERT Fork is an off road fork and as such, does not come with the reflectors for on road use installed. Reflector bracket kit P/N 85-3674 is available through your dealer. Have your dealer or mechanic install the kit 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 (inner legs) removed from the crown. The steer tube and stanchions are press fit assembled at the factory. Pressing them out will permanently damage the crown, steer tube, and stanchions beyond repair and render them unsafe for any continued use. Stanchions may be removed from the upper and lower triple clamps.
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 any Manitou Fork if any parts appear to be broken, bent, cracked, or damaged. Contact your dealer or Answer Products Technical Support, (800) 670-7446, 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 working 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 modified, 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

Figures 1,2, &3

Insure that the proper steer tube has been delivered on your fork. 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 98 XVERT 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 brakes and adjust per manufacturers instructions.

Note: All 98 Manitou Forks Forks are equipped with a secondary catch dropout.

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.
    Ensure 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: The XVERT comes equipped with a hangerless arch. Brake cable hangers that attach to the arch are available through your dealer P/N 85-3644. See Figure 2

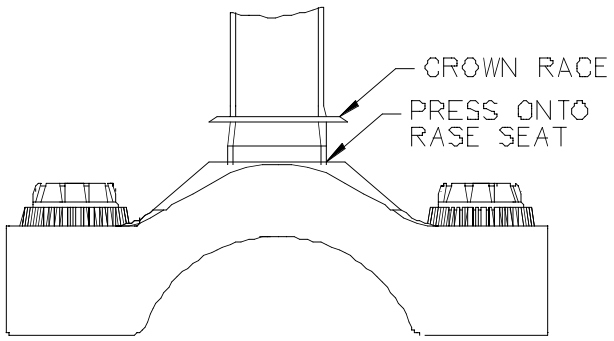


FIGURE 1: RACE INSTALLATION

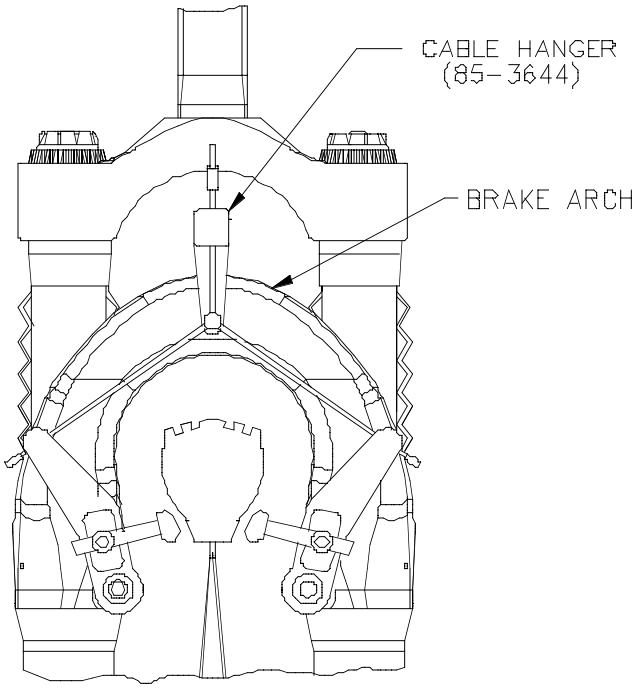


FIGURE 2: BRAKE CABLE ROUTING

! WARNING

When installing wheel or any new tire check the minimum tir clearance. Measure from the highest point on the tire to the

bottom of the crown. The minimum clearance allowed is as follows: XVERT SC 3.2" (81MM)
XVERT R 4.0" (102MM)
XVERT TI 5.0" (129MM)
Any less clearance can result in accident resulting in serious injury or death. Figure 3

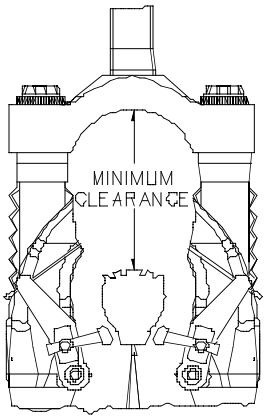


FIGURE 3: TIRE CLEARANCE

SPARE PARTS: Table 1

Spare parts can be ordered through your local dealer. If you have any problems that you cannot resolve with your dealer, you may call Answer Products Technical/Warranty Service Department at (805) 257-4411, 8:00 AM to 5:00PM, Pacific Standard, Monday through Friday, In addition helpful information can be found on the Answer Products Web Site, http://www.answerproducts.com. Included on the site is down loadable manuals and e-mail technical support.

DESCRIPTION	PART NUMBER
5 WEIGHT FORK OIL, 8 OZ BOTTLE	85-3470
2.5 WEIGHT FORK OIL, 8 OZ BOTTLE	85-3471
DH FORK CAR RACK ADAPTER	85-3534
98 VERT STICKER SET	85-3567
98 XVERT TI STICKER SET	85-3568
98 XVERT R STICKER SET	85-3569
1 1/8" TO 1 _" HEADSET KIT	85-3645
XVERT INNER LEG PLUG REMOVAL KIT	85-3654
100CC 5 WEIGHT FORK OIL	85-3656
98 OEM REFLECTOR BRACKET KIT	85-3674
X-VERT/R/HAYES BUSHING KIT	85-3733
98 SOFT KIT SX/SX R/SX RR	85-3538
98 MEDIUM KIT SX/SX R/SX RR	85-3839
98 FIRM KIT SX/SX R/SX RR	85-3840
ADJUSTER KIT ALUMINUM SX & XVERT	85-3848
98 CROWN STEER INNER LEG SET XVERT CROMOLY	85-3858
98 CROWN STEER INNER LEG SET XVERT ALUMINUM	85-3859
98 REBOUND DAMPER REBUILD KIT XVERT/R	85-3864
98 REBOUND DAMPER REBUILD KIT XVERT TI	85-3865
98 COMPRESSION DAMPING REBUILD KIT SX/R/XVERT	85-3866
98 COMPRESSION DAMPING KIT XVERT R	85-3868
98 COMPRESSION DAMPING REBUILD KIT XVERT TI	85-3869
98 SOFT RIDE KIT XVERT R	85-3871
98 MEDIUM RIDE KIT XVERT R	85-3872
98 FIRM RIDE KIT XVERT R	85-3873
98 CROWN STEER SET XVERT R ALUMINUM	85-3875
98 CROWN STEER SET XVERT TI ALUMINUM	85-3876
98 INNER LEG SMALL XVERT R	85-3877
98 INNER LEG LARGE XVERT R	85-3878
98 INNER LEG MEDIUM XVERT R	85-3879
98 INNER LEG SMALL XVERT TI	85-3880
98 INNER LEG LARGE XVERT TI	85-3881
98 INNER LEG MEDIUM XVERT TI	85-3882
98 XVERT RED CASTING ASSEMBLY	85-3890
98 XVERT/R MANGO CASTING ASSEMBLY	85-3891
98 BUSHING REMOVAL TOOL	85-3892
98 BUSHING SIZER TOOL	85-3893
98 XVERT HAYES MANGO CASTING ASSEMBLY	85-3895

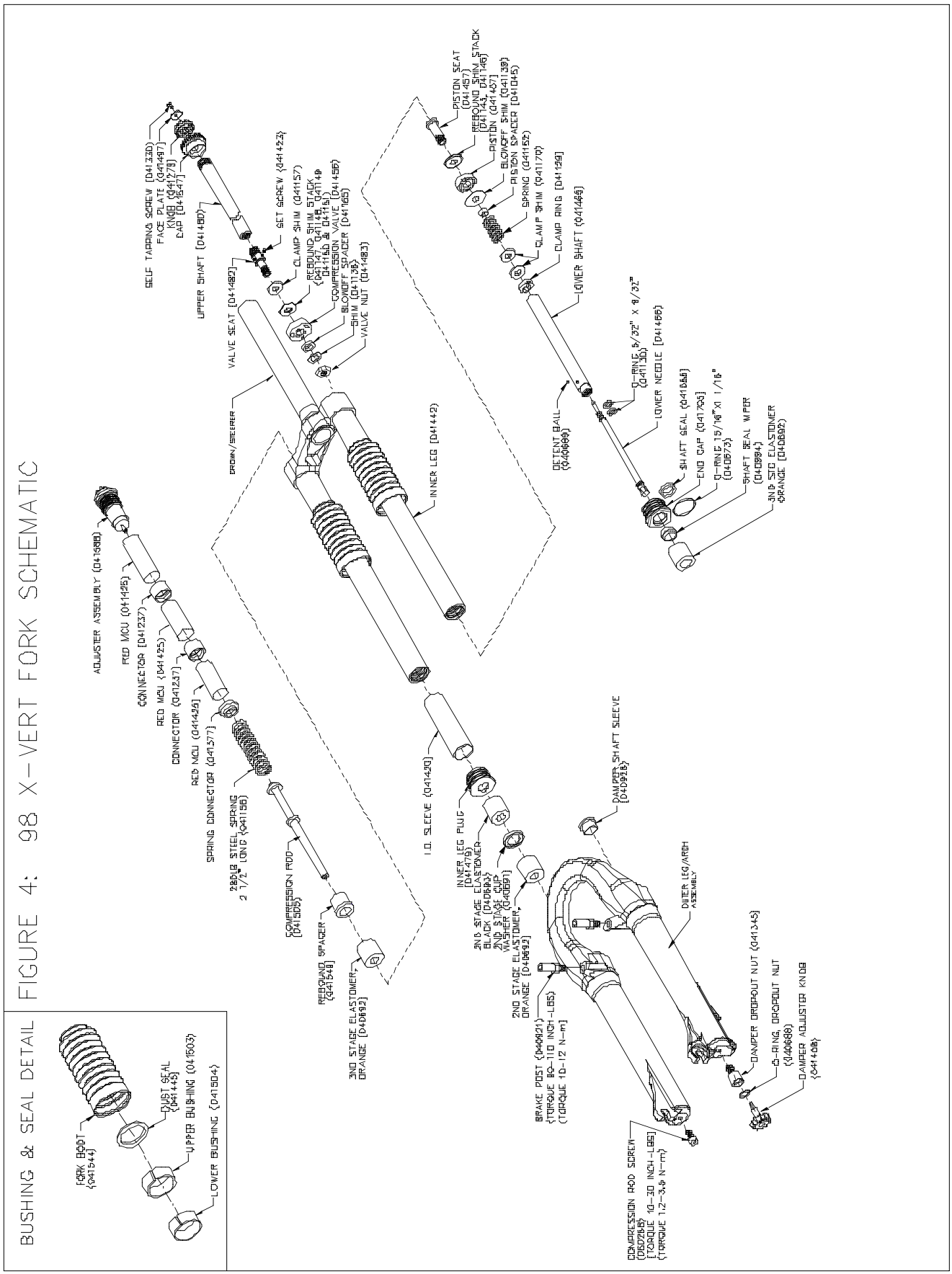
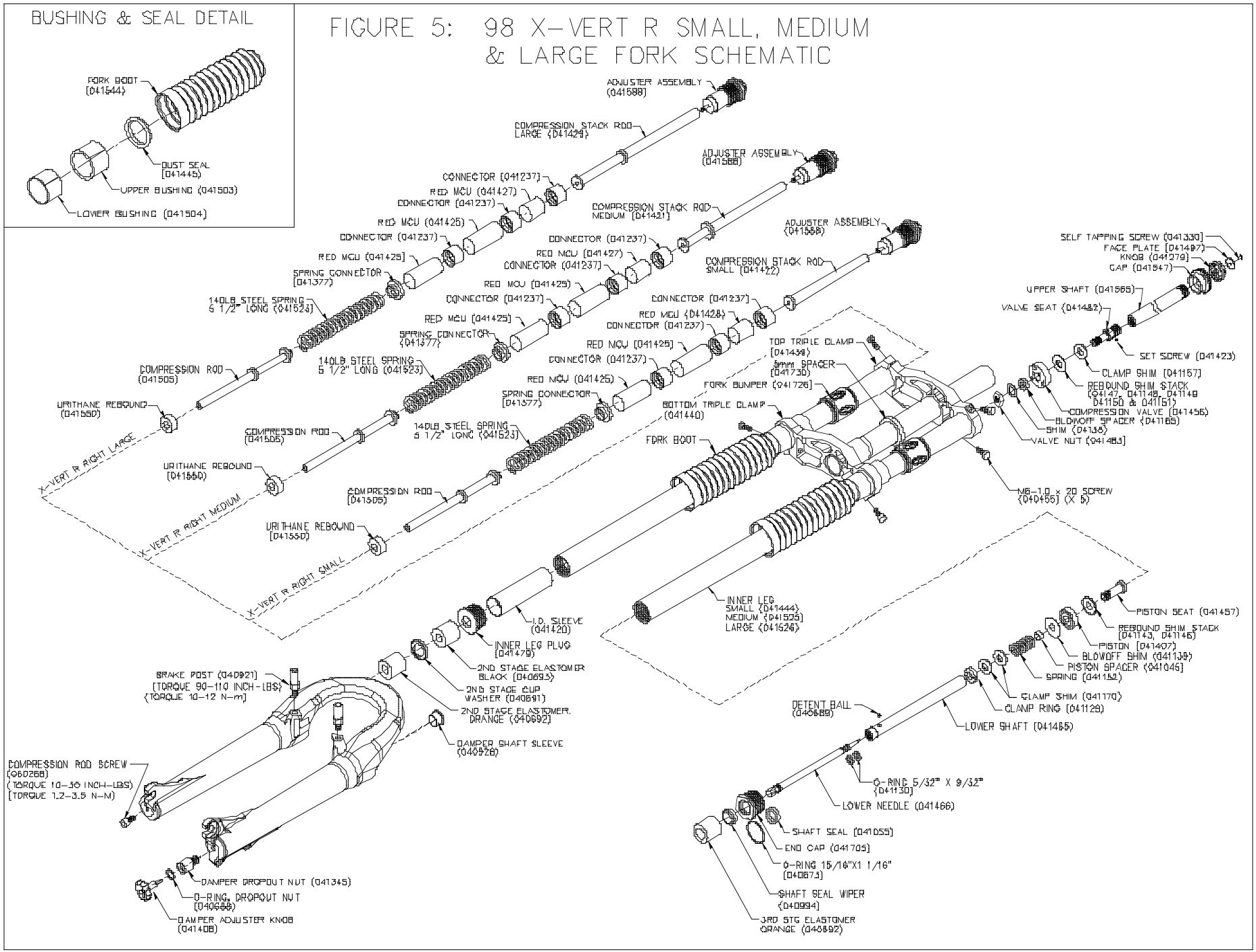
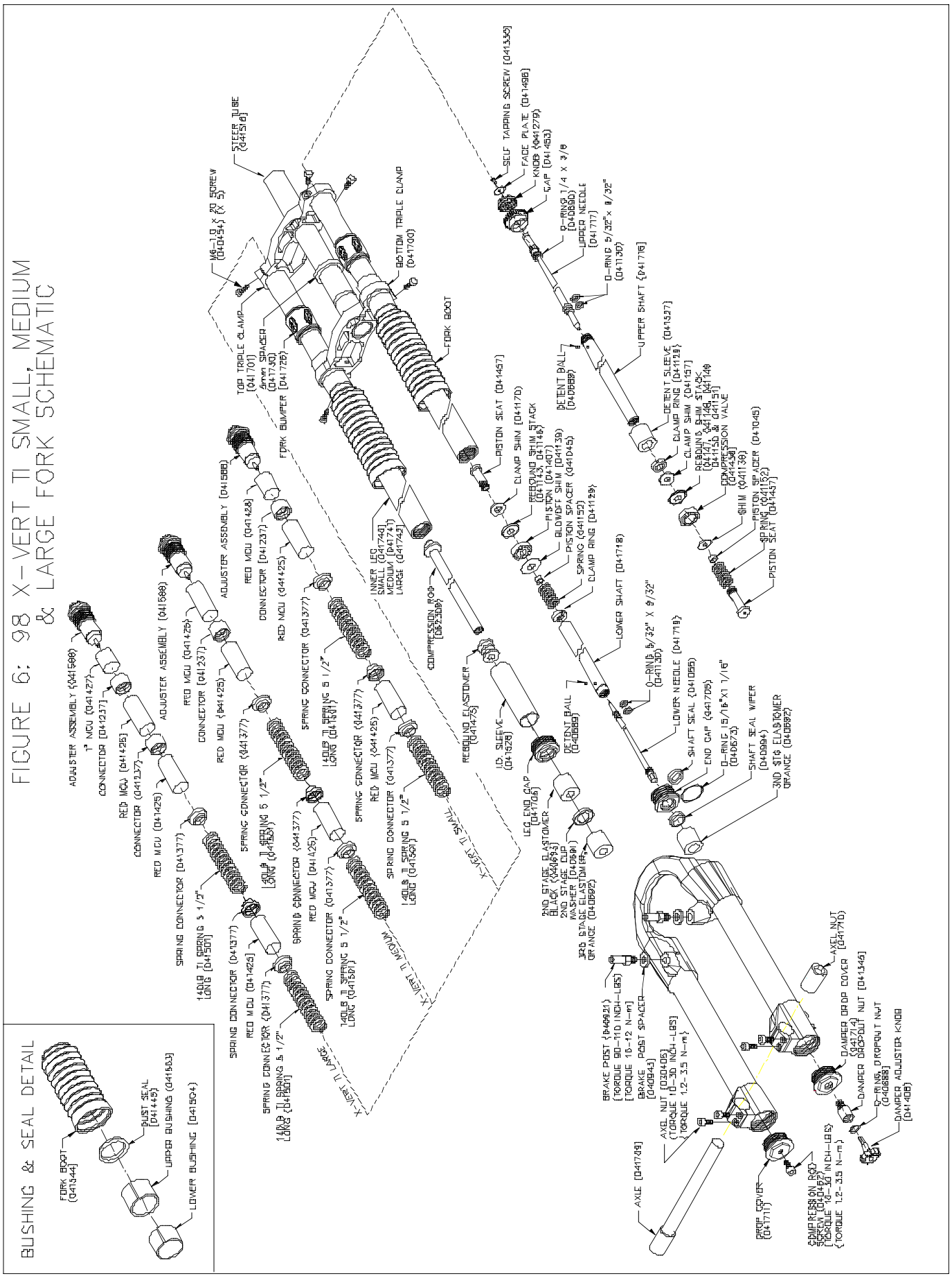

FIGURE 4: 98 X-VERT FORK SCHEMATIC
BUSHING & SEAL DETAIL
FORK BOOT (041544)
DUST SEAL (041445)
UPPER BUSHING (041503)
LOWER BUSHING (041504)
ADJUSTER ASSEMBLY (041688)
RED MCU (041426)
CONNECTOR (041237)
RED MCU (041425)
CONNECTOR (041237)
RED MCU (041425)
SPRING CONNECTOR (041577)
28DIA STEEL SPRING 2 1/2" LONG (041156)
COMPRESSION ROD (041505)
REBOUND SPACER (041548)
3ND STAGE ELASTOMER ORANGE (040893)
I.D. SLEEVE (041429)
INNER LEG PLUG (041479)
2ND STAGE ELASTOMER BLACK (040894)
2ND & THIRD CUP WASHER (040891)
2ND STAGE ELASTOMER ORANGE (040892)
BRAKE POST (040821) (TORQUE 80-110 INCH-LBS) (TORQUE 10-12 N-m)
DAMPER SHAFT SLEEVE (040918)
COMPRESSION ROD SCREW (040876) (TORQUE 10-30 INCH-LBS) (TORQUE 1.2-3.4 N-m)
OUTER LEG/ARCH ASSEMBLY
DAMPER DROPOUT NUT (041345)
O-RING, DROPOUT NUT (040688)
DAMPER ADJUSTER KNOB (041468)
SELF TAPPING SCREW (041330)
FACE PLATE (041447)
KNOB (041278)
CAP (041547)
UPPER SHAFT (041480)
VALVE SEAT (041482)
DRAW/STEERER
SET SCREW (041423)
CLAMP SHIM (041157)
REBOUND SHIM STACK (041147, 041148 & 041151)
COMPRESSION VALVE (041465)
BLOWOFF SPACER (041165)
SHIM (041136)
VALVE NUT (041483)
PISTON SEAT (041457)
REBOUND SHIM STACK (041144, 041146)
PISTON (041457)
BLOWOFF SHIM (041138)
PISTON SPACER (041045)
SPRING (041152)
CLAMP SHIM (041170)
CLAMP RING (041169)
LOWER SHAFT (041466)
DETENT BALL (040689)
O-RING 5/32" X 9/32" (041135)
LOWER NEEDLE (041466)
SHAFT SEAL (041856)
END CAP (041705)
O-RING 15/16"X1 1/16" (040873)
SHAFT SEAL WIPER (041894)
3ND STG ELASTOMER ORANGE (040892)

FIGURE 5: 98 X-VERT R SMALL, MEDIUM & LARGE FORK SCHEMATIC




FIGURE 6: 98 X-VERT TI SMALL, MEDIUM & LARGE FORK SCHEMATIC
BUSHING & SEAL DETAIL
FORK BOOT (041344)
DUST SEAL (041445)
UPPER BUSHING (041503)
LOWER BUSHING (041504)
ADJUSTER ASSEMBLY (041588)
1" MCU (041427)
CONNECTOR (041237)
RED MCU (041425)
CONNECTOR (041377)
SPRING CONNECTOR (041377)
RED MCU (041425)
14DLB TI SPRING 5 1/2" LONG (041501)
SPRING CONNECTOR (041377)
RED MCU (041425)
SPRING CONNECTOR (041377)
14DLB TI SPRING 5 1/2" LONG (041502)
X-VERT TI SMALL
ADJUSTER ASSEMBLY (041588)
RED MCU (041428)
CONNECTOR (041237)
RED MCU (041425)
SPRING CONNECTOR (041377)
14DLB TI SPRING 5 1/2" LONG (041501)
SPRING CONNECTOR (041377)
RED MCU (041425)
SPRING CONNECTOR (041377)
14DLB TI SPRING 5 1/2" LONG (041502)
X-VERT TI MEDIUM
ADJUSTER ASSEMBLY (041588)
RED MCU (041428)
CONNECTOR (041237)
RED MCU (041425)
SPRING CONNECTOR (041377)
14DLB TI SPRING 5 1/2" LONG (041501)
SPRING CONNECTOR (041377)
RED MCU (041425)
SPRING CONNECTOR (041377)
14DLB TI SPRING 5 1/2" LONG (041502)
X-VERT TI LARGE
M6-1.0 x 20 SCREW (040454) (X 5)
STEER TUBE (041451)
TOP TRIPLE CLAMP (041701)
6mm SPACER (041730)
FORK BUMPER (041726)
INNER LEG SMALL (041744) MEDIUM (041745) LARGE (041746)
COMPRESSION ROD (062306)
REBOUND ELASTOMER (041475)
I.D. SLEEVE (041628)
DETENT BALL (040888)
LEG END CAP (041706)
2ND STAGE ELASTOMER BLACK (040874) 2ND STAGE CUP (040891) 2ND STAGE ELASTOMER (040892)
3RD STAGE ELASTOMER ORANGE (040892)
BOTTOM TRIPLE CLAMP (041700)
FORK BOOT
PISTON SEAT (041457)
CLAMP SHIM (041170)
REBOUND SHIM STACK (041143, 041146)
PISTON (041407)
BLOWOFF SHIM (041139)
PISTON SPACER (041045)
SPRING (041150)
CLAMP RING (041129)
LOWER SHAFT (041718)
O-RING 9/32" X 9/32" (041130)
LOWER NEEDLE (041719)
SHAFT SEAL (041085)
END CAP (041705)
O-RING 15/16"X1 1/16" (040573)
SHAFT SEAL WIPER (040994)
3RD STG ELASTOMER ORANGE (040892)
SELF TAPPING SCREW (041335)
FACE PLATE (041498)
KNOB (041279)
CAP (041453)
O-RING 1/4 X 3/8 (040850)
UPPER NEEDLE (041717)
O-RING 5/32" X 9/32" (041130)
UPPER SHAFT (041716)
DETENT SLEEVE (041537)
CLAMP RING (041158)
CLAMP SHIM (041157)
REBOUND SHIM STACK (041147, 041148, 041149, 041150 & 041151)
COMPRESSION VALVE (041456)
SHIM (041136)
PISTON SPACER (041045)
O-RING (041152)
PISTON SEAT (041457)
BRAKE POST (040921) (TORQUE 80-110 INCH-LBS) (TORQUE 10-12 N-m)
BRAKE POST SPACER (040843)
AXLE NUT (030405) (TORQUE 10-30 INCH-LBS) (TORQUE 1.2-3.5 N-m)
AXLE (041709)
DROP SERVER (041711)
DAMPER REBOUND ROD SCREW (040827) (TORQUE 10-30 INCH-LBS) (TORQUE 1.2-3.5 N-m)
AXEL NUT (041710)
DAMPER DROP COVER (041714)
DAMPER DROPOUT NUT (041345)
O-RING, DROPOUT NUT (040888)
DAMPER ADJUSTER KNOB (041408)

MAINTENANCE

IMPORTANT: The 98 XVERT 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 XVERT performing well and your warranty in effect. Use of this fork with the boots removed will shorten the life of the fork, reduce the performance and void the warranty.

Your 98 XVERT Fork requires periodic maintenance, cleaning, and inspection. Moisture and contamination may build up inside the for depending on the severity of riding conditions. To maintain top performance it is recommended that the fork be periodically disassembl cleaned, dried and re-greased.

Note: The best way to prevent sticktion is to lift the fork boots up and apply a light spray of lube to the stanchion area in and above seals. Be sure to use a lubricating oil, not a penetrating fluid like WD 40. Stroke the fork several times adding more lube. Wipe off excess lube from just the seal area while keeping the stanchions moist with lubricant. Reposition the boots.
When cleaning the fork do not direct water spray at the seals. Figure 7

IMPORTANT: Before every ride you should:
1. Ensure that quick release skewers are properly adjusted and tight.
2. Wipe the inner legs clean, lubricate 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 & check brake adjustment

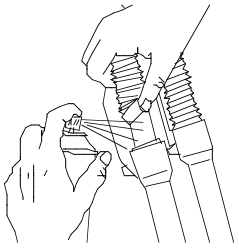


FIGURE 7: LUBRICATING THE BUSHINGS

IMPORTANT: Maintaining the proper oil level in your TPC is very important. Not enough oil will allow foaming and reduce the performance. Too much oil will restrict travle and may cause damage to the system and an unsafe riding situation, Finish reading this entire section prior to making any changes to the oil level.

To check the oil level remove only the compression damping 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 3.5" (89MM) and 5.75" (146MM) below the crown where the damping assembly screws in. The recommended level is 4.75" (120MM). Use SAE 5WT Maxima fork oil or equivalent. Figure 8

Model	Minimum	Maximum	Recommended
Xvert	4.5" (114mm)	3" (76mm)	3.75" (95mm)
Xvert R	9" (228mm)	7" (178mm)	8" (203mm)
Xvert TI	7" (178mm)	5" (127mm)	6" (152mm)

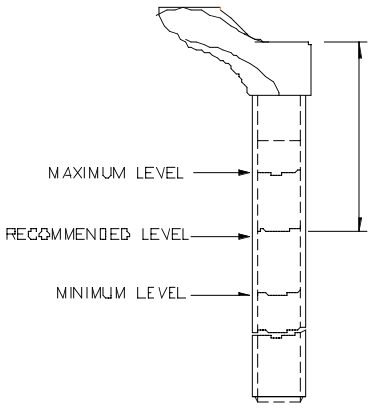


FIGURE 8: TPC OIL LEVEL

GENERAL DISSEMBLY

NOTE: The Fork does not need to be removed from the bicycle for general disassembly-assembly or cleaning. It is also not necessary to disassemble the 98 Manitou Forks for compression Elastomer replacement. Elastomer replacement is accomplished by removing the adjuster assembly per Figure 10.

Removal of outer leg / arch assembly XVERT & XVERT R Figure 9:

1. Use a 4MM allen wrench to remove the M6 lower compression rod screw from the right leg dropout. Pop out the damping adjuster knob from the left dropout. A small screwdriver may be helpful. Use a 8MM allen wrench to remove the dropout nut. Fully compress the fork to prevent the compression rod and damper shaft from turning while removing screws.
2. Pull outer leg assembly down to remove from the inner legs and crown.
3. Remove fork boots.

Note: It is not necessary to remove the dust seal every time the fork is disassembled. The seal and bushings may be cleaned and re-greased in place.

4. Bushing replacement will require the use of the bushing removal and installation available from Answer Products. It is recommended that the bushings be left installed unless they absolutely need replacement.

Compression Stack & Compression Rod Removal Figure 10:

1. Slide off 2nd and 3rd stage Elastomer from right leg compression rod.
2. Unscrew and remove the adjuster assemblies by hand.
3. Turn fork upside down to remove the compression rod. If forks are installed on the bicycle give the rod a quick thrust and catch it as it pops up above the crown.

Lower Shaft Disassembly Figure 11:
Note: Lower Shaft disassembly is best done with fork removed from the bicycle. Disassembly of the damping stack is not required unless you want to change or replace the shim stack.

1. Remove the left cap compression damping assembly from the top of the fork leg and pour the oil out of the top of the fork and discard appropriately. For complete disassembly continue.
2. Remove the plastic end cap and pull the lower shaft out of the inner leg.
3. Remove 2nd or 3rd Stg Elastomer and capture the 1/8" Dia detent ball.
4. Adjuster needle must be unscrewed from the shaft.
5. Remove valve nut using end wrench and holding the shaft in soft jaws or collet to prevent damage.

Compression Damping Disassembly figure 12:
1. The compression damping assembly is almost identical to the lower shaft assembly.
2. Unscrew the compression damping adjuster all the way until it stops. The knob and the needle do not need to be removed. The shaft also does not need to be removed from the cap. The threads are bonded to prevent leaking.
3. Remove either the valve nut of the piston seat following the instructions above for the lower shaft assembly.

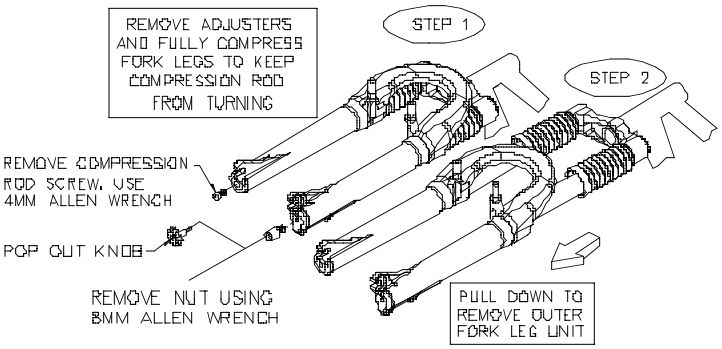


FIGURE 9: OUTER LEG REMOVAL

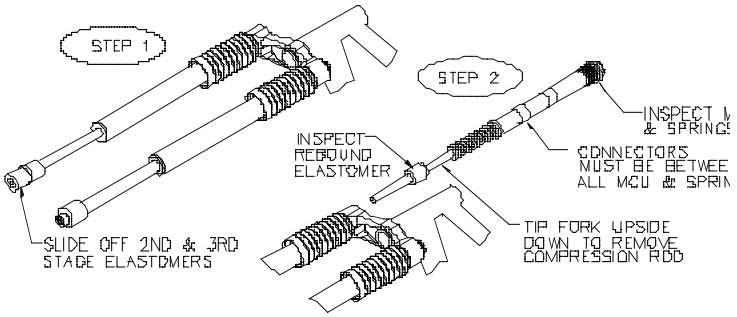


FIGURE 10: COMPRESSION STACK

FIRGURE 11: LOWER TPC SHAFT ASSEMBLY

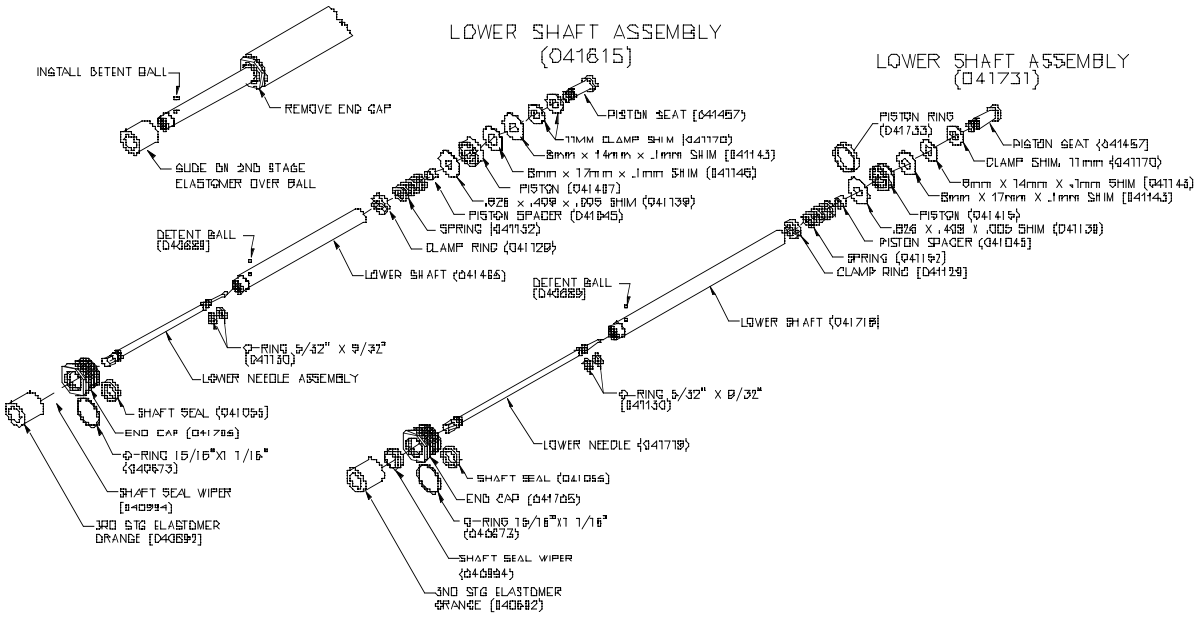
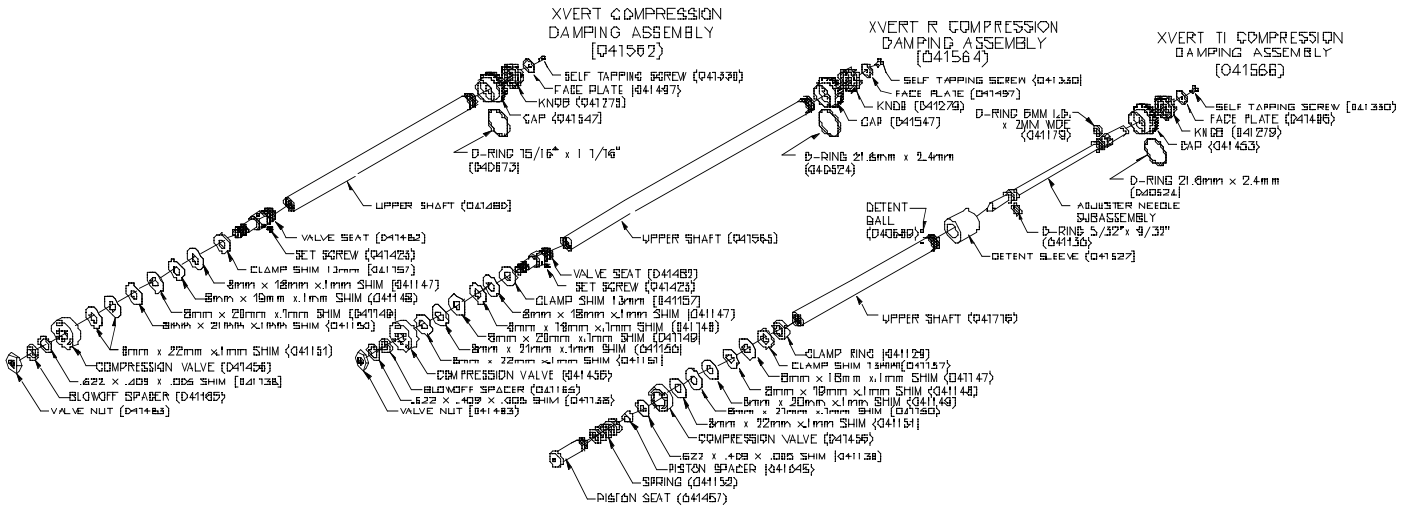


FIGURE 12: TPC COMPRESSION DAMPING ASSEMBLY



DAMPER INSPECTION

1. Check the shaft for scratches, wear, or other obvious damage.
2. Check the seal gland and end cap seal grooves for damage.
3. Check shims for permanent bends or damage.
4. Check all other parts for obvious damage, replace if necessary.
5. Replace all seals that have been removed.

FORK INSPECTION

1. Check the fork boots for obvious damage.
2. Check the dust seal for tears, wear, or damage. Replace if needed.
3. Inspect the lower and upper bushing for damage to the Teflon coating. Replace using the bushing removal and replacement kit if necessary.
4. Check all MCU & springs for obvious damage. Replace if necessary.
5. Check the prelude adjuster and connectors. Replace if damaged.
6. Check the outer leg/arch assembly for nicks or deep gouges on outside and inside. Replace if damaged.
7. Check the inner leg for deep gouges and other obvious damage. Minor wear resulting in color change is not detrimental to the gold anodize surface. Replace if wear is excessive or damaged.
8. Check inner legs at the bottom of the crown for cracks or for flaking anodize. Replace crown steer leg assembly if cracked or if gold anodize is beginning to flake.
9. Check the underside of the crown for cracks. Replace if cracked.

RE-ASSEMBLY

Lower Shaft Figure 11:

1. Install all o-rings and seals removed.
2. Grease all seals lightly with a seal grease.
3. Apply small amount of blue loctite to piston seat threads.
4. Assemble shim stack and spacers inexact order that they were removed. For XVERT & XVERT R , thread on valve nut and torque 30 IN-LB (3.5 N-m) max. For XVERT TI hand tighten piston seat. Be sure large blow off washer will slide over piston spacer and compress the small small spring. Clamp shaft in soft jaws or collet and line up slots in clamp ring with hole in piston seat using 1/8" or smaller pin. Use a 5mm allen wrench and tighten piston seat by turning allen wrench and pin at the same time. Torque 30 IN-LB (3.5N-m) max.
5. XVERT TI install lower needle gently into shaft, thread until it stops then back off one turn for initial adjustment.
6. Slide shaft assembly through the plastic end cap, place detent ball in place and slide 2nd stg Elastomer.
7. Insert into left leg and thread in end cap. Torque 30 IN-LB (3.5N-m) max.
8. Add approximately 100CC of 5WT Maxima or equivalent oil. Do not over fill. Check oil level, see Figure 8.

Compression Damping Assembly Figure 12:

1. Reassemble compression damping stack following the instructions above for the lower shaft assembly.
2. Install compression damping assembly into the leg. The oil level should cover the compression valve when the assembly is installed.

1. Clean all parts thouroughtly.

Compression Rod & Boots Figure 13:

2. Grease compression rod lightly. Be sure rebound Elastomer is installed on to compression rod.
3. Drop compression rod down into inner legs. Shake inner leg to get rod through inner leg plug.
4. Slide on black second stage, cup washer, and orange 3rd stage Elastomer.
5. Slide boots onto inner leg.

Outer Leg Assembly Figure 14:

1. Slide Outer leg /Arch assembly onto inner legs and fully compress.
2. Install and torque 5MM compression rod screw and dropout nut to 10-30 inch-lb. (1.1-3.5 N-m). **Over torquing the dropout nut may damage the damper shaft.**
3. Pop in damper adjuster knob. O-ring holds knob in place (XVERT &XVERT R only).
4. Slide skirt of fork boot onto the outer leg groove. Be sure the lip snaps into the groove.
5. Clean adjuster cap threads thoroughly. Clean threads on inside of inner leg.
6. Assemble MCU's, springs, and connectors with thick grease.
7. Install adjuster assembly into inner leg just hand tight.

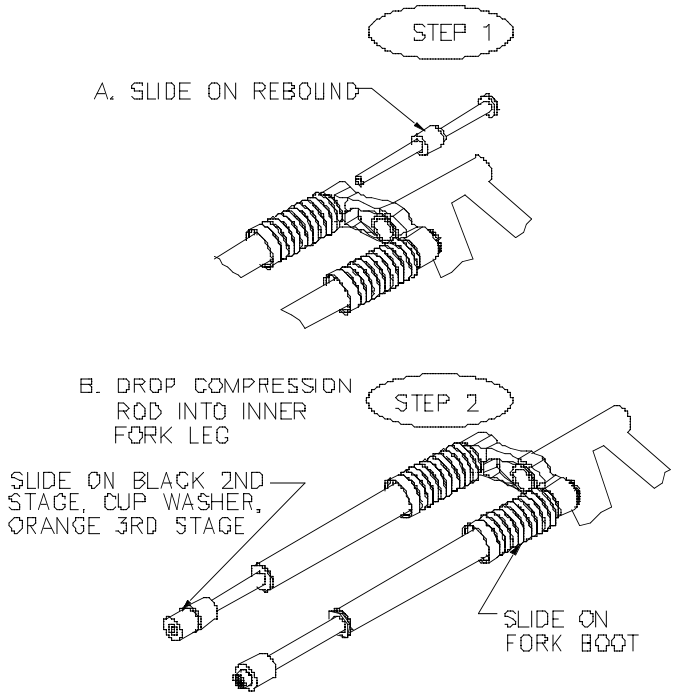


FIGURE 13: COMPRESSION ROD & BOOT

! WARNING

INNER FORK LEGS & CROWN

The inner fork legs and steer tube are press fit into the crown and may never be removed. Removing them will make the fork unsafe to use. If you see any slippage contact Answer Technical Staff immediately (800) 670-7446.

! WARNING

BRAKE ARCH

NOTE: The 98 XVERT brake arch is permanently bonded to the outer legs and is not removable. If the unit is damaged or if the bond is broken or separated it must be replaced. Using the fork with a damaged brake arch is unsafe and could cause serious injury. Contact Answer Products if you suspect that your brake arch bond is damaged.

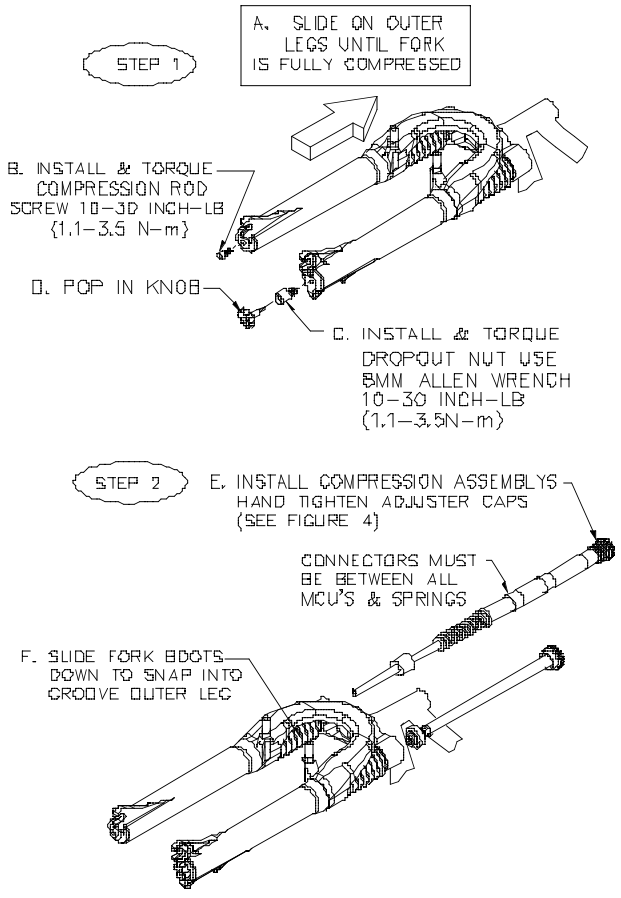


FIGURE 14: OUTER LEG ASSEMBLY

ADJUSTING RIDE QUALITIES

98 XVERT forks offer a wide adjustment range to suit individual riding preference and rider weight by simply changing the Micro Cellular Urethane (MCU's). Fine tune adjustments can be made using the preload adjuster located on top of the fork crown. Softer blue, and harder yellow MCU's are available from your Dealer.
NOTE: Since 98 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 XVERT forks.

Compression Spring Fine Tuning: Figure 15
Fine tuning adjustments to the spring rate are made by rotating the adjuster knobs located on top of the crown. The 98 XVERT's use a compression spring system in the right leg only. The right knob is used to adjust preload. Rotating the knobs clockwise will firm the ride, adding preload to the compression stack. Rotating the knobs counter clockwise will soften the ride. Four full revolutions will take the adjuster from full soft to the extreme firm setting.

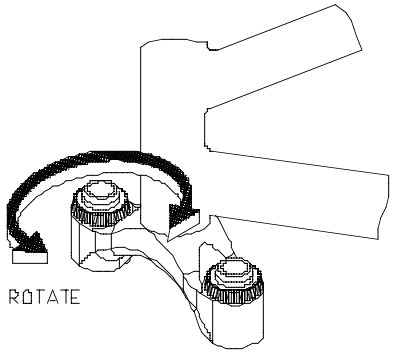


FIGURE 15: PRELOAD

Compression Damping Fine Tuning: Figure 16
To adjust the compression damping for the XVERT and the XVERT R remove the compression damping assemble from the top of the left leg. Adjust the set screw in the valve seat to increase compression damping and out to reduce the compression damping. Try adjusting one full turn at a time. To adjust XVERT TI models simply rotate the compression damping knob located on top of the left leg 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 good in all condition.

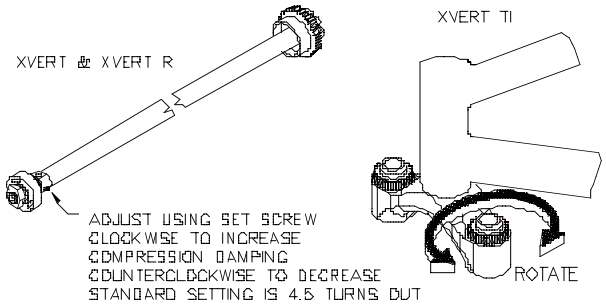


FIGURE 16: COMPRESSION DAMPING

Rebound Damping Fine Tuning: Figure 17
To adjust the XVERT 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 rebound damping will give you a harsh ride over repetitive bumps (like braking bumps) because the fork will pack up. Insufficient rebound damping will make the fork over active, top out and slap back when landing from a jump. We suggest that you try adjusting your fork on the very active side, minimum rebound. Then try it over a variety of terrain and turn in more rebound from there.

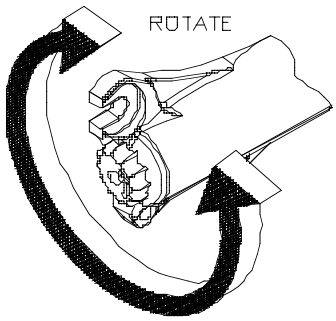


FIGURE 17 REBOUND DAMPING

For additional tuning tips we recommend that you obtain a copy of the MRD tuning Manual P/N:85-3485 and check out the MRD Race Tuning kits available at your dealer.

TROUBLE SHOOTING

Fork seems to "top out" or has slight clunking feel when front wheel comes off the ground:
Excessive preload or insufficient rebound damping will result in a "top out". Select MCU's that better fit your weight and riding style, having the preload adjuster set mid to low range, and increase the rebound damping to eliminate "top out".

The fork feels less active and is not getting the travel it used to when it was new:
Chances are that the fork is developing stiction. Cleaning and applying light oil to the stanchions will help.

Outer legs feel loose on inner legs and bushings, a knock or rock can be felt when pushed from side to side.
Avery small knock is normal with the new 98 harder bushings. If the knock is excessive or you can feel the fork rocking then the bushing should be removed and replaced. To do this you must have the Answer Products Bushing Removal and Replacement Tool Kit.

A small amount of oil seems to be leaking from the left leg at the adjuster cap:
If the 98 XVERT is stored upside down for a period of time a small amount of oil may leak through the adjuster cap / knob assembly. The cap area is not subjected to damping pressure. A small leak in that area will not affect the performance of the fork or cause any type of damage. We recommend that you store your Manitou right side up. If this condition causes you some problems please contact your Answer Products dealer or call our warranty tech department for prompt service.

Fork is making a scraping noise that sounds as if the spring is binding:
There is a small seam around the outer diameter of the bushing connector. This seam is probably rubbing on the inside diameter of the right inner leg. To eliminate the scraping sound, remove the right side adjuster assembly, elastomer and spring. File or sand the outside diameter of the clear bushing connector just enough to remove the seam. Lubricate the spring, elastomers and bushing spacers liberally with grease and re-insert into fork. Tighten the right adjuster cap.

CYCLE COMPUTER INSTALLATION INSTRUCTIONS:
Follow the instructions in your owners manual with the following exceptions:

WARNING: DO NOT DRILL A HOLE IN THE DROPOUT. THIS MAY WEAKEN THE DROPOUT, WILL VOID THE WARRANTY, AND MAY CAUSE AN UNSAFE CONDITION WITH RISK OF INJURY. DO NOT USE THE TEMPLATE PROVIDED IN THE 95 OR 96 SERVICE MANUAL.