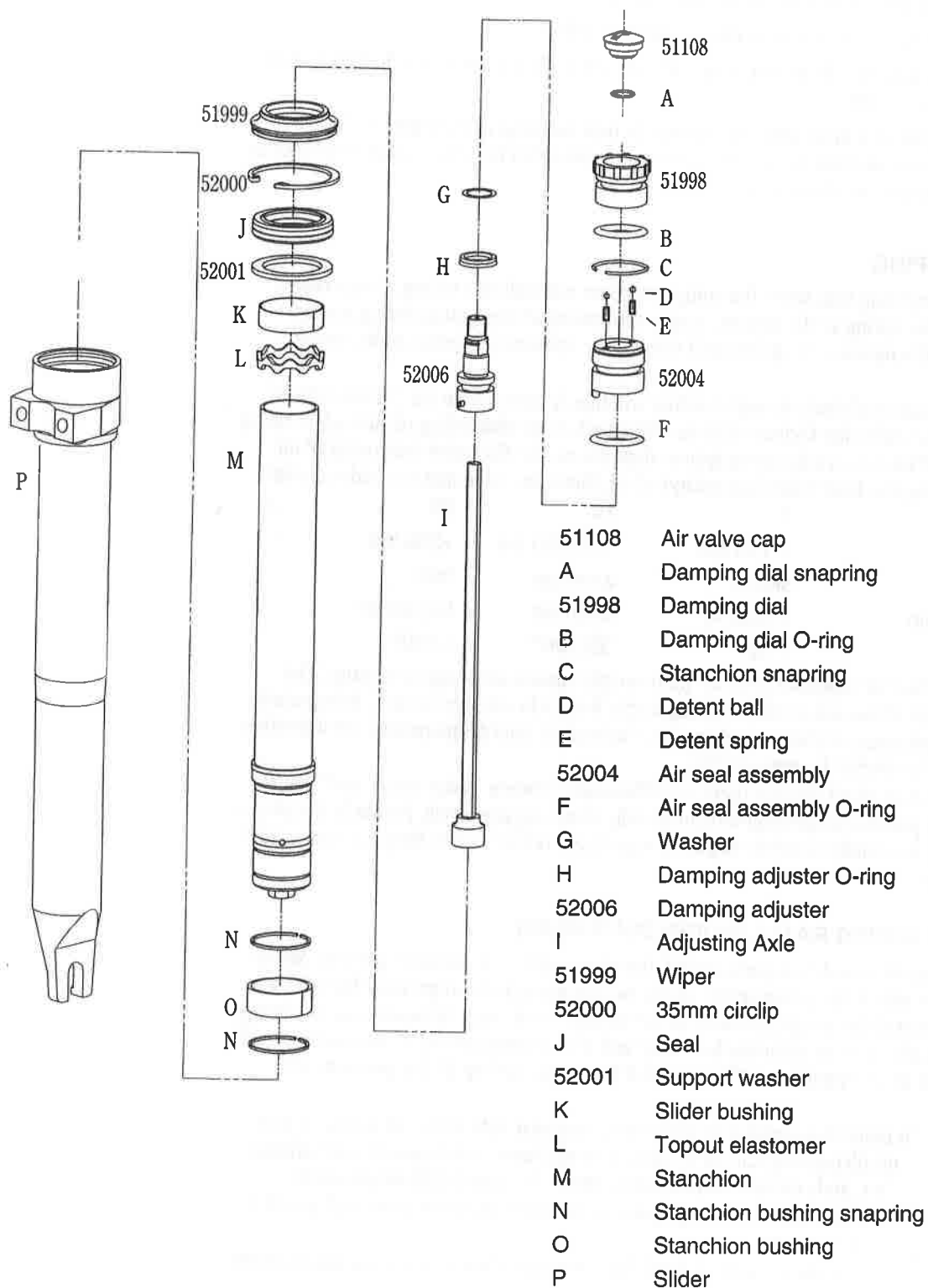


TREK.USA

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MOGUL BLACK DIAMOND SUSPENSION FORK EXPLODED VIEW



MOGUL BLACK DIAMOND SUSPENSION FORK

REBUILD



Fig. 23

Snapping
driver
Snapping
guide

2. Insert one spring and then one ball into each hole in the top of the air seal assembly.
3. Slide the damping dial into the stanchion, aligning the flats of the dial with the corresponding flats of the damping adjuster.
4. Place the snapping guide over the schraeder valve (Fig. 22). Use the narrow end of the snapping driver to install a new snapping (Fig. 23).
5. Ensure that the damping dial is held firmly in place.

INSTALL BRAKE ARCH

1. Remove the 2 bolts with washers attaching the brake cable housing stop (BCHS) to the brake arch (Fig. 24).
2. Clean the bolts, and apply LocTite 242 to the threaded portions. Re-install.
3. Tighten the bolts to 55-70 lb•in (63-81 kgf•cm).
4. Clean the brake arch attachment bolts and brake studs. Apply LocTite 242 to the threads.
5. Rotate the sliders so that they face forward and install the brake arch allen bolts (2) and both brake studs (2), **but do not tighten them yet.**

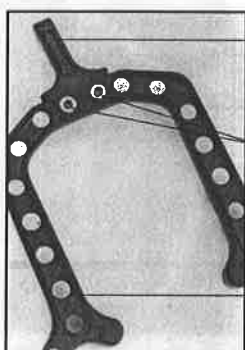


Fig. 24

BCHS
BCHS
attachment
bolts
Brake
arch

INSTALL FORK LEGS

1. Make sure that the stanchions are inserted an equal distance into the fork crown. The stanchions should be even, and should not extend more than 1/8 inch (3mm) above the fork crown (Fig. 25).
2. Clean the crown pinch bolts thoroughly. Apply LocTite™ 242 to the threaded portions.
3. Turn the damping dial fully counter-clockwise. Then rotate the damping dial clockwise until you reach the second click. Align the "2" on the damping dial with the stanchion slot in the fork crown.
4. Install the pinch bolts and washers. Tighten to 78-96 lb•in (90-110 kgf•cm).
5. Tighten the brake arch bolts to the sliders to 90-110 lb•in (104-127 kgf•cm). Tighten the brake bosses to 90-100 lb•in (104-115 kgf•cm).

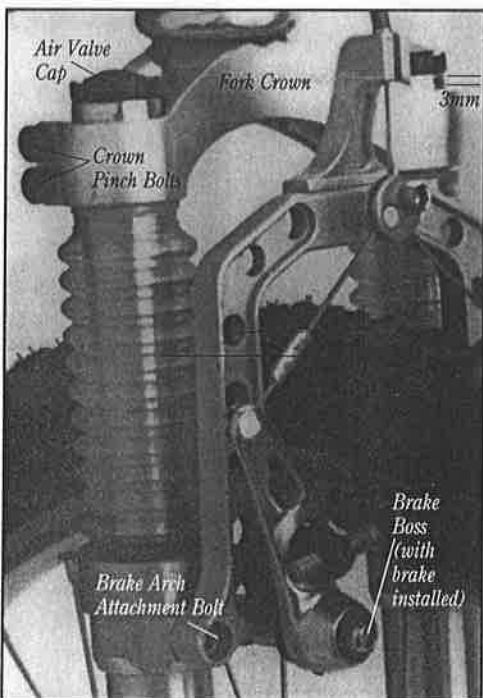


Fig. 25

INFLATE THE FORK

1. Adjust the air pressure and damping as described in the Trek Suspension Fork Owner's Manual Supplement.
2. Install the air valve caps.

INSTALL BRAKES

1. Re-install brakes and adjust as necessary.

MOGUL BLACK DIAMOND SUSPENSION FORK

REBUILD

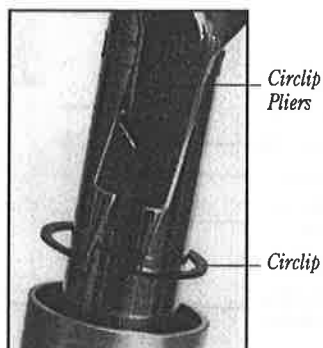


Fig. 10

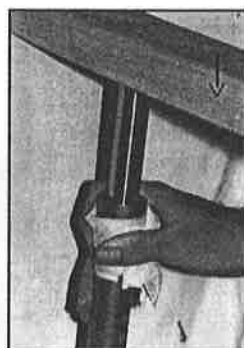


Fig. 11

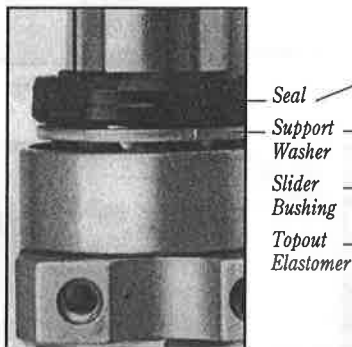


Fig. 12

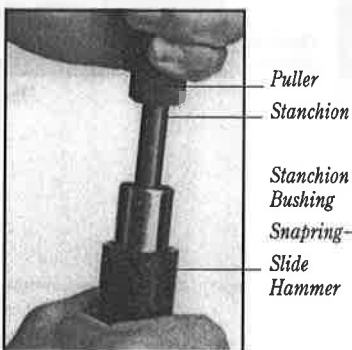


Fig. 13

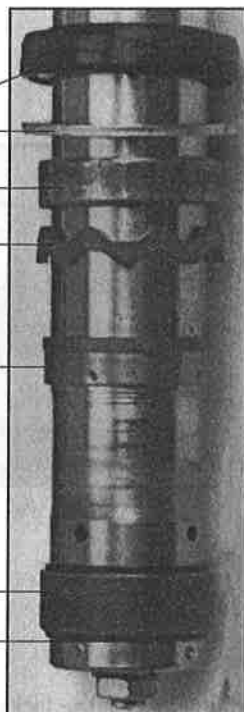


Fig. 14

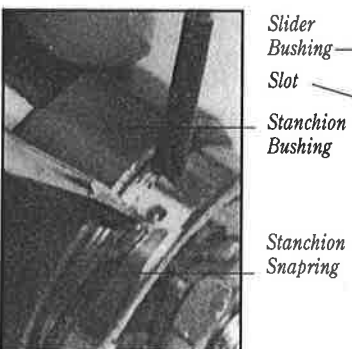


Fig. 15

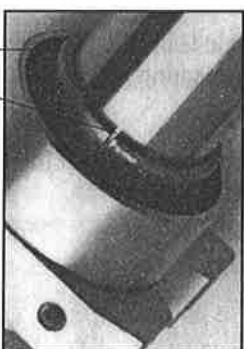


Fig. 16

INSPECTION

1. Make sure there are no dents, scratches, or other wear marks on the stanchion. Any damage to the stanchion's chrome surface may allow leakage at the seal. Damaged or worn stanchions should be replaced with a new fork leg.
2. Check that there are no dents in the slider. Dents in the slider could interfere with bushing movement and restrict the movement of the slider. Damaged sliders should be replaced with a new fork leg.
3. Do not disassemble the valving mechanism in the end of the stanchion (Fig. 15). This part is pressed in and is not serviceable. If the valve is damaged, the entire fork leg must be replaced.

ASSEMBLY

CLEAN ALL PARTS

1. Clean each part thoroughly. Do not use solvents or chemicals which break down fork oil. Avoid any material that may leave lint which could cause leakage of the seals.

INSTALL STANCHION

1. Install a new stanchion bushing on the stanchion. Install a new snapring.
2. Lubricate the stanchion bushing with fork oil and slide the stanchion into the slider. Slide a new topout elastomer over the stanchion and into the slider.
3. Slide a new slider bushing over the stanchion. Lightly grease the outside of the bushing with Teflon grease. Make sure that the slot in the slider bushing is pointing to either side (Fig. 16), but not to the front or back of the slider.

CAUTION: If placed incorrectly, the bushing may scratch the stanchion under heavy loads.

4. Drive the bushing into the slider with the narrow end of the slide hammer (Fig. 17). The correct bushing insertion will not be flush, but will extend above the inside of the slider about 1/8 inch (3mm) (Fig. 18).
5. Slide the support washer onto the stanchion.

INSTALL SEAL

1. Apply Teflon grease to the inner lip of the seal. Place the installation cap over the stanchion to cover the minimum insertion tape on the stanchion. This prevents scratching of the seal. Note: The **bottom** of the seal has a small spring visible. Slide the seal over the installation cap (Fig. 19).

MOGUL BLACK DIAMOND SUSPENSION FORK

REBUILD

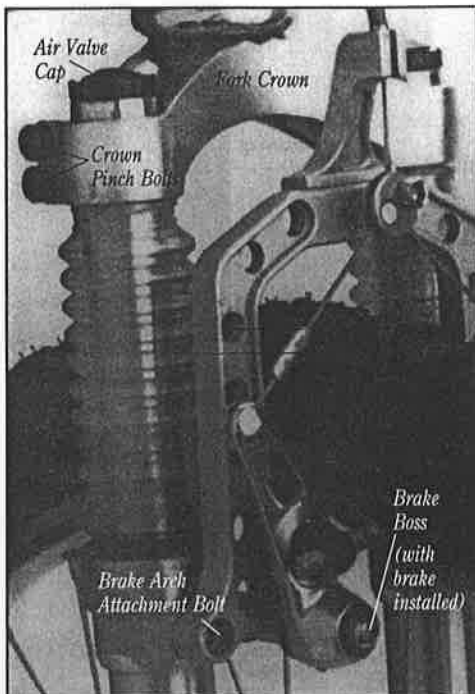


Fig. 1

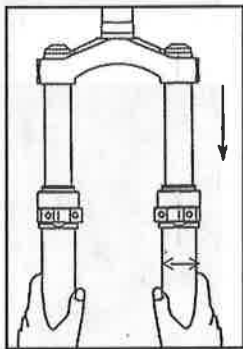


Fig. 2

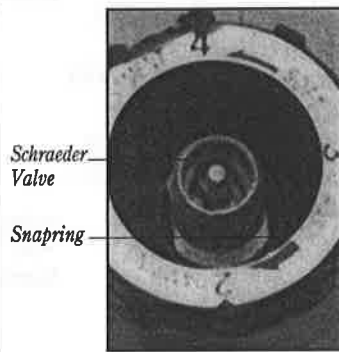


Fig. 3

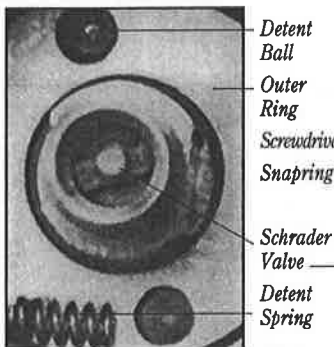


Fig. 4



Fig. 5

DISASSEMBLY

The following steps may be performed with the fork in or out of the bike. Before performing these steps, clean the fork thoroughly to prevent contamination of the fork.

REMOVE BRAKES

REMOVE BRAKE ARCH

1. Remove both brake bosses (Fig. 1).
2. Remove the allen bolts that attach the brake arch to the slider collars. Remove the brake bridge.

REMOVE FORK LEGS

1. Remove the crown pinch bolts and washers.
2. Grasp the sliders with both hands and pull downwards while pushing and pulling the fork legs (Fig. 2).

REMOVE AIR SEAL ASSEMBLY

1. Make sure the air is at the top of each fork leg by compressing and rebounding the fork leg while in an upright position.
2. Remove the air valve cap (Fig. 1).
3. Set the damping dial fully clockwise to the #4 (maximum).
4. Press down on the top of the damping dial and remove the small snapping at the base of the schraeder valve (Fig. 3).
5. Pull the damping dial out of the stanchion. Remove the small balls and springs (Fig. 4).
6. Release all the air from the stanchion.
7. Place a 15mm socket on the outer ring surrounding the schraeder valve (Fig. 4). Push down about 1/8 inch (3mm) into the stanchion, just until the snapping is visible. Do not push any further than contact with the adjusting axle underneath (Fig. 8).
8. Remove the snapping. Pry one end of the snapping downward and toward the center of the stanchion with a small, thin screwdriver (Fig. 5). Use another small screwdriver to lift the end of the snapping up the first screwdriver's blade, and over the snapping's groove, and then pull the snapping from the stanchion. Be careful not to scratch the inside of the stanchion.
9. Thread the puller onto the schraeder valve and pull the assembly out of the stanchion (Fig. 6).

REMOVE THE SEAL

1. Fully extend the fork leg. Fill the stanchion with oil to 1 3/8 inch (35mm) below the top of the stanchion.

MOGUL BLACK DIAMOND SUSPENSION FORK

OIL CHANGE *Without Disassembling the Fork*

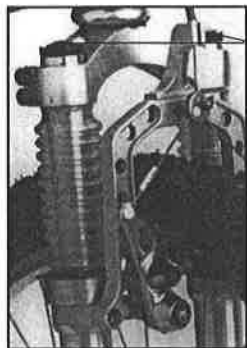


Fig. 1

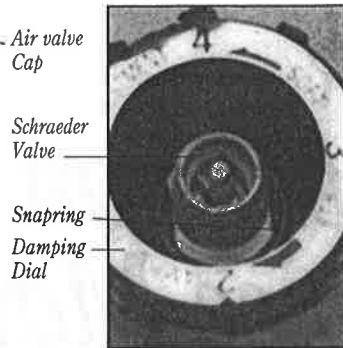


Fig. 2

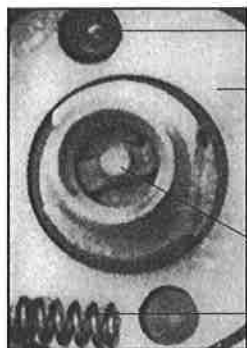


Fig. 3



Fig. 4



Fig. 5

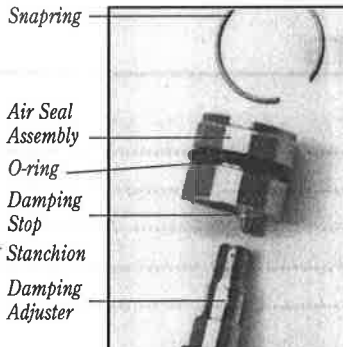


Fig. 6



Fig. 7

Please Note: Fork oil should be handled with care. Do not take internally. Avoid contact with skin. Always follow safety precautions, such as the use of protective eyewear. Fork oil may stain many materials. Dispose of used fork oil properly by following local, state, and federal guidelines. Please recycle.

The following information is for one fork leg only. Complete these procedures for one fork leg before beginning work on the second leg.

REMOVE DAMPING DIAL

1. Make sure the air is at the top of each fork leg by compressing and rebounding the fork while in an upright position.
2. Remove both air valve caps (Fig. 1).
3. Set the damping dial at 4 (maximum).
4. Clean the area around the top of the stanchions, schraeder valves, and fork crown thoroughly.
5. Press down on the top of the damping dial and remove the small snapring at the base of the schraeder valve (Fig. 2).
6. Pull the damping dial out of the stanchion. Remove the small balls and springs (Fig. 3).
7. Release all air from each stanchion.

REMOVE AIR SEAL ASSEMBLY

1. Place a 15mm socket over the outer ring surrounding the schraeder valve (Fig. 3). Push down about 1/8 in. (3mm) into the stanchion, just until the snapring is visible. Do not push any further than contact with the adjusting axle underneath (Fig. 8).
2. Remove the stanchion snapring. Pry one end of the snapring downward and toward the center of the stanchion with a small, thin screwdriver (Fig. 4). Use another small screwdriver to lift the end of the snapring up the first screwdriver's blade, and over the snapring groove, and then pull the snapring from the stanchion. Be careful not to scratch the inside of the stanchion as scratches may damage the O-rings during assembly.
3. Thread the puller onto the schraeder valve and pull the assembly out of the stanchion (Fig. 5).

REMOVE OIL

1. Turn the fork leg upside down and drain the oil into a container by stroking the slider up and down on the stanchion until the oil is removed from the fork, (Fig. 7). It is not necessary to get the last drop.