

HYDRAULIC DAMPER SERVICING

NOTE: Disassembly of the hydraulic damper should be left for a dealer who is familiar with servicing the WB hydraulic damper. Special tools are required along with experience in servicing hydraulic damper units.

1.) **CAUTION:** Damper oil is under pressure, directions for disassembly must be followed very carefully. **ALWAYS WEAR SAFETY GLASSES AND PROTECT YOUR CLOTHES SHOULD OIL SPRAY OUTWARDS.** First, remove the core of Schrader valve.

NOTE: The failure of the piston o-ring will cause oil to squirt out of Schrader valve. Cover valve core with a rag when removing. The core should remain out until you reassemble the leg. Fold a thick cloth or shop rag and then fold again to get 4 layers, place over the end on the shaft. Next hold the rag tightly to the shaft and gently unscrew the needle holding the end of the shaft down in a drain pan. This will release the oil pressure in a controlled manner. Place leg in vise with soft jaws and unscrew the seal head with a pin spanner. After all threads are showing use a rag and pull up on seal head to expose the o-ring and remove from leg. Grasp damper rod and lift up slowly. Remove nylon seal head and complete damper rod assembly from fork leg. Dump old oil out of fork leg. Remove damping adjust needle assembly from damping rod by unthreading counter clockwise and pulling out of damping rod. Inspect small o-ring on damping adjust needle assembly and replace if damaged in any way. Also inspect o-ring on nylon seal head for swelling and replace if damaged in any way. Also inspect damping piston ring to ensure its sealing surface is smooth with no gouges or scratches. Replace if necessary. If damper was leaking oil at seal head, replace this seal. It is recommended that you always replace seal # WB-97-1409 every time damper is disassembled. **NOTE:** Readjusting damper shim stack is not recommended. If damping does not meet rider's requirements, call the WB suspension service department for recommendations on valving adjustments. Check the shims to make sure that they lay flat against the piston. Carefully check that the rebound shim that is touching piston on all sides. Replace if necessary. If shim stack is removed be extra careful not to mix the shims. The shim on the shaft side must float on the aluminum collar along with the spring.

FLOATING PISTON DISASSEMBLY

With schrader valve still out, remove floating piston with air pressure by gently turning inner leg upside down, then place inner leg flat on a level surface (table). Next, with a compressed air gun, gently introduce air into the air valve. **NOTE:** Use eye protection with high-pressure discharge operations. As pressure builds, the air valve piston will be forced out. Now inspect piston for wear or damage. The o-ring should be replaced every time the piston is removed.

REASSEMBLE DAMPER & FLOATING PISTON

2.) Apply non-lithium grease to groove of inner leg. Then install floating piston by carefully easing it past the threads of inner leg. The hollow side must face the air source or to the bottom of the leg. Continue piston down into leg to a depth of eleven inches from top of tube. This depth is the proper piston height in the leg. Next install schrader valve. Fill the leg to the top with fork oil 3wt. to 5 wt. At this point insert the needle into the shaft and screw in until the o-ring is just below the end of the shaft. Grease the inner lip of seal head before installing on shaft. Install seal head with new seal and o-ring on shaft; take care not to damage the small o-ring on threads of the shaft. Install rod assembly with piston ring into leg. Use your fingers to compress the piston ring taking care not to bind the ring. The tabs should not overlap. Install in leg slowly. The shaft has a hole in it that should face away from you. Cover it with your free hand. Oil will squirt out when installing in leg. Push piston and rod under oil until the hole in shaft is just under the oil level. Use one hand to keep shaft from moving down any further and push the seal head into leg with your other hand. Note the seal head has a hole in it; keep your hand over hole when installing seal head. Keep pressure between the piston and the seal head when screwing the seal head into the leg. **DO NOT LET THE SHAFT MOVE INTO LEG UNTIL THE LEG IS PRESSURIZED.** If this happens you will have to start over. Push seal head down past the o-ring until the threads are touching top of leg. Let go of shaft and screw in the seal head with a pin spanner. Fill the leg with 50-150 psi using a shock pump. Now push the shaft down to see if it compresses and extends smoothly. It should be in the fast return position. Now screw in the shaft to see if the return slows down. If the shaft works in both directions the assembly is complete. Adjust the setting after the cap is installed.

3.) At this point clean all parts with a clean, non-abrasive rag. A mild grease cutting cleaner or solvent might make this an easier task.

4.) Once the legs are clean, inspect seals for tears or cracks. Next, inspect the fork tubes for wear, nicks or scrapes. If there is noticeable play between fork legs and fork tubes, the DU bushes located inside the outer fork leg may require replacement. Consult White Brothers or your dealer if servicing or repair is necessary. Special tools (available from White Brothers) are required to replace and reinstall DU bushes.

5.) If everything is free of problems, coat all parts with a light coating of suspension lube or other suitable, non-lithium grease. Also lube the DU bushings that are located inside fork outer leg by dipping a socket extension in grease and applying the grease to the DU bushings.

6.) If they are being replaced, install oil seals back into lip of outer leg, then snap circlip into next lip, then wiper seal. Apply recommended grease to seals. Carefully slide outer fork leg over inner fork leg making sure not to curl seal lips (oil seal and wiper seal) under during this process. Stroke outer fork leg to make sure it is sliding smoothly over inner leg.

7.) Securing damper shaft with aluminum clamp blocks pn 97-700 in vise, thread fork cap with small spacer in cap onto damper shaft clockwise until fully tightened. Thread the fork cap into outer fork leg and tighten fully. Stroke fork to check for smooth operation. Adjust damping adjust needle to 3 turns out (counter clockwise) or the position you have found to work best for you from past experience.