Installation Instructions

Shock Seal Heads

Note: Rebuilding shock absorbers is not for inexperienced mechanics. Use good judgment when deciding whether or not to rebuild your shock yourself. These instructions are very general and you should have a service manual for your particular model of bike to get a better understanding of your particular make of shock.

1) Clean shock absorber.
   a) Remove spring noting the original placement of spanner nuts for reassembly.
   b) Set all rebound and compression settings to the softest position noting original placement for reassembly.

2) Disassemble Bladder assembly.
   a) Bleed nitrogen out of nitrogen reservoir by pressing on the valve core with a screwdriver. During this process point the valve away from you.
   b) Remove the shock bladder from the shock body by pushing it in and removing the snap ring that retains it. Screw the valve cap back on and pull the bladder assembly out gently. (FIG A)
   c) Check the bladder for any cuts replace if necessary.
   d) Drain off oil from bladder reservoir, pump shock shaft to discharge oil from shock body.

3) Disassemble shock body.
   a) Remove bottom out plate from shock body by tapping around the edge with a punch, or by tapping in the pre exiting holes in the shock body. This part is a press fit into the shock body. (FIG B)
   b) Remove the large snap ring that retains the shock seal head by pushing the seal head into the shock body.
   c) Pull shock shaft assembly out of shock body. (FIG C)
   d) Drain off oil.

4) Seal head removal.
   a) To replace the seal head the shim stack must be removed.
   b) Most manufacturers keep the shim stack nut from backing off by deforming the end of the shock shaft. Remove the nut. The end of the shaft may need to be ground down but in some cases internal valves in the shock shaft may prevent this.
   c) Remove the shim stack. DO NOT CHANGE THE ORDER OF THE SHIM STACK PLATES OR WASHERS.
   d) Remove the stock seal head.
   e) The shock shaft at this time should be closely inspected for nicks rust pitting or scratches. Any imperfections on the shaft could cause seal damage.
   f) At this time inspect the bottom out bumper if it is damaged or disintegrating replace it with a new one.

5) Seal head installation.
   a) Where the chrome shaft meets the portion of the shaft where the shim stack is located there is a step down that typically has a very sharp edge. (FIG D)
   b) Lightly chamfer this portion of the shaft be careful not to damage the shaft during this process. Installing a seal over this edge without chamfering will cause seal damage.
   c) Apply a thin layer of grease to the new seal head and shock shaft. The use of a seal installation tool (seal bullet) is recommended for the installation of the seal onto the shaft. Slide the new seal head onto the shaft making sure that the bottom out bumper and plate are in place.
   d) Reinstall the shim stack and associated washers. Reinstall the shim stack nut using lock tight. To ensure that the nut will not back off use a punch to deform end of the shaft slightly to keep it from backing off. (FIG E&F)

6) Reassembly of the shock absorber.
   a) With the shock body held firmly in a vice fill the shock body and bladder body half way with shock oil.
b) Reinstall the bladder. Reinstall the bladder snap ring; make sure the bladder seats into place.
c) Remember air is the enemy.
d) Fill the shock body ¾ full of oil.
e) Push the shim stack/piston into the shock body and down into the oil. Stroke the assembly up and down to remove air trapped inside of the shock shaft while keeping the piston submerged in the oil.
f) Top up the oil as necessary. Remember air is the enemy.
g) After smooth action is achieved top off the oil level to the snap ring groove. It may be necessary to let the air settle out of the oil.
h) Push the seal head down into place. Note that there is an air bleed hole in the seal head; push the seal head slowly into the oil. Reinstall the snap ring; make sure the seal head seats into place.

7) Inspect your work.
a) Before recharging shock inspect all snap rings for proper placement.
b) The shock could explode if weakened deformed or improperly seated snap rings are used during recharge. Recharge the shock with nitrogen to the factory recommended pressure. Note high pressure gas is dangerous. A qualified mechanic with the correct tools should inspect the assembled shock and perform the recharge.

8) Final assembly.
a) Reinstall the spring and adjust spanner nuts and compression and rebound settings to match the original placement.
b) Install All Balls Racing sticker.

NITROGEN CHARGING SETUP