

1986 GL 1200i 44,000 Miles  
Master and Slave Clutch Cylinder Rebuilding

Hydraulic clutch would fade out, finally decided to rebuild the system. I ordered all OEM parts for both master and slave cylinders before disassembly. I found the deposits in the brake fluid reservoir very nasty as well as the far end of the master cylinder, at the threads to the banjo bolt. The slave cylinder was also ugly with deposits staining the walls of the cylinder. If you read the other 'how to' posts on this forum, like I did, you will have a good idea what to expect. Here are a few tips and comments that you may find valuable:

Slave cylinder:

Remove the plastic tank on the lower left side and the brake switch spring on the right side to get access to the slave cylinder. Remove the banjo bolt from the slave cylinder, pull the hydraulic line out of the keeper and position in a place that can easily drain excess fluid. Use a six-sided 8mm socket and a 1/4" breaker-bar to break free and retighten the slave mounting bolts. A ratcheted box end wrench is very effective in moving these bolts in or out. Once removed, I placed the slave cylinder into a 1 1/4" PVC coupling and "spanked" it onto the workbench to remove the piston from the cylinder. Once out and thoroughly cleaned, use 1000 grit sandpaper with motor oil to remove the deposits from the aluminum slave cylinder wall. Reassemble using DOT 4 brake fluid as a lubricant on the piston seal and motor oil on the actuator rod seal.

Master cylinder:

Remove front brake light switch and the reservoir cover screws to visualize (should be empty) the hydraulic fluid level. Pump the control lever to clear out the remaining fluid. Remove the brake light switch and the control lever from the master cylinder assembly. Remove the banjo bolt and separate the hydraulic line from the assembly. Replace the reservoir cover before removing the assembly from the handlebars. Undo the choke cable end from the plastic choke control lever and carefully unscrew the assembly from the 90' choke cable housing. Remember to completely protect your paint from spilled brake fluid. Once removed from the handlebars, disassemble the master cylinder and remove the old parts. Pay attention to the sequence of the parts.

Thoroughly clean the master cylinder, particularly the far end of the cylinder. Use the 1000 grit sandpaper w/motor oil on a dowel rod to lightly polish the inside of the cylinder wall if needed. Thoroughly re-clean the assembly, removing all oil and foreign matter, wiping it "rifle bore" clean.

Before you reassemble the master cylinder, you will need to set the secondary seal onto the piston. I used a 3/8" drive 10mm socket, lubed with DOT #4, to

pre-stretch the seal. Carefully, with as much force as you can muster, stretch the seal over the end of the piston. Pay attention to the direction (cup towards the screw) and make sure the seal is fitted without any twists. It will sit very square when seated properly.

Lubricate the parts with DOT#4 and fit the parts in the proper sequence. Now, using all three of your hands, collapse the springs with pressure to fit the snap ring into place over the retaining washer. You can now fit the rod and boot into the end of the master cylinder and reinstall the assembly onto the handlebars. Take this time to clean and lube the clutch lever pivot and brass push rod end-piece.

#### Bleeding the system:

Once both the master and slave units have been completely reinstalled, it's time to fill and bleed the hydraulic fluid. I filled the reservoir and carefully (it will squirt at you) pumped the lever with the slave unit still unattached to the hydraulic line.

Once you can see the fluid flowing out of the slave banjo fitting, reattach the hydraulic line to the slave unit. With the bleeder screw open, cover the end of the screw with you finger and slowly squeeze the control lever. Making sure the reservoir level is always full, repeat this step until the air bubbles appear to be gone. Now, close the bleeder screw and do the ole squeeze and bleed sequence. The lever will not get a firm feel until the line is bled at the master cylinder banjo bolt. Making sure to keep the reservoir filled, a couple more sequences was all that it took to finish bleeding the system.

After completing this task and noting the condition of the master cylinder, I consider the servicing of both cylinders an essential effort, without question.