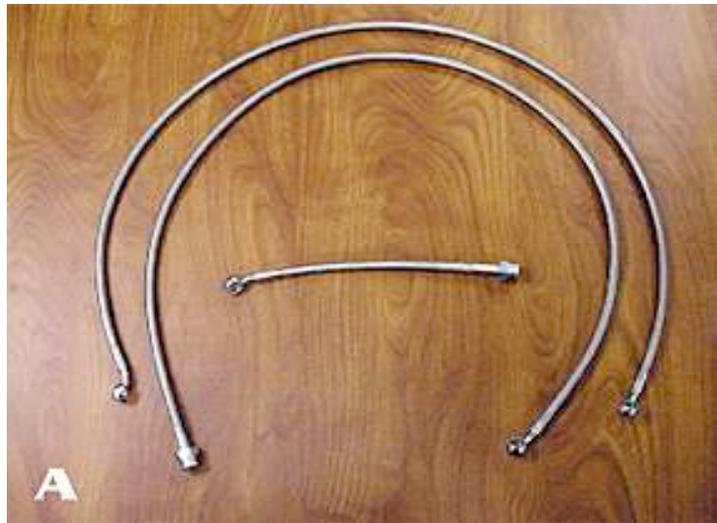




## Honda GL1500 Stainless Steel Brake Line Installation Instructions

The performance world has long known the advantages stainless steel brake lines give to brake systems. Even new rubber brake lines can't match stainless steel for brake performance. Rubber expands under pressure. The older the lines, the more they expand. The hotter the brakes and brake fluid get, the more the rubber line expands. All this expansion adds up to decreased brake power at times when you need it the most.



### Honda GL1500 3-Line Brake Line Hose Kit

A word of caution before we get into what is involved in installing stainless steel lines on a Gold Wing. There is no substitute for braking skill in reducing braking distance. Stainless steel lines will improve the tool, but the tool is nothing without the craftsman.

The Honda GL1500 stainless steel line kit (**see photo A.**) consists of three lines that are a direct replacement for the hoses that connect the rear brake hard line to the rear caliper, the rear brake hard line to the front left caliper and the front brake master cylinder to the front right caliper. (There is a fourth hose on the GL1500 buried under the gas tank. It is very short, and unless it is showing signs of dry rot or leakage will not affect the outcome of this brake upgrade.) Randakk's Cycle Shakk sells this mid-hose separately.

Start with the front line. Remove the right front rotor cover and peel down the rubber cover from the brake line connection at the master cylinder on the right

handgrip. Remove the banjo bolt that connects the brake line to the front caliper first. Drain the brake fluid into a can to keep it off of wheels and tires. Next, remove the banjo bolt that connects the brake line to the master cylinder. Unclip the retaining clips from the old rubber line and remove the line from the bike. Note the route the old line takes and feed the new stainless steel line back along the same route. Using the new crush washers and the existing banjo bolt, connect the banjo end of the stainless steel line to the master cylinder and tighten firmly. (**See Photo B.**)



Next, using the new crush washers and the existing banjo bolt, connect the stainless steel line to the front caliper and tighten firmly. (Note both front calipers are connected in the same manner with the same hardware. (**Photo C.** is of left front caliper)

Making sure that the retaining clips are around the new line, slide the rubber cover over the connection at the handgrip connection. The front line is now done except for bleeding.

A quick word about bleeding; new lines need to be primed. Unless you have a vacuum pump such as the Mighty Mite to pull brake fluid from the master cylinders through the new lines and calipers you will have to fill the new lines as you install them. This can be done with a small syringe before connecting the line.



The next line is the one that connects the front left caliper to the rear master cylinder. Remove the right lower fairing panel. Remove the right cooling fan. Remove the right lower inner panel (the one the compressor controls are mounted in). Remove the right side panel that covers the battery. Remove the left front rotor cover.

Remove the banjo bolt from the left front caliper and disconnect the old brake line. Use a can to drain the brake fluid into, keeping it off the tire and wheel. (**See Photo D.**)

Just to the left of the secondary air filter box there is a bracket bolted to the side frame member that holds the connection between the rubber brake hose you are going to remove and the ridged steel line that comes forward from the master cylinder (below your right knee if you were sitting on the bike). (**See Photo E.**)

Remove the bolt holding the bracket to the frame and remove the metal clip that holds the bracket to the lines. (**See Photos F and G.**)

Next, unscrew the rubber line from the ridged line. A little preaching here, you need the proper wrenches for this connection: a 10mm brake line wrench and a 17mm open-end wrench. Without them you run a high risk of damaging the connectors. To loosen this type of connector, start by slightly tightening it first, then back it off.

Pull the old line out of the bike and pull the new line back through the same path the old one came out of.

Reconnect the ridged steel line to the stainless steel line using the proper wrenches and firmly tighten.

Slide the support bracket into place and secure with the retaining clip. (**See Photo H.**)

Reinstall the bracket on the frame member and check to see that the line runs from front to back as the old line did.

Now we move to the rear line. Remove the four bolts that hold the tour box in place, remove the lower trim panel on the tour box and lift the tour box up high enough to allow the left side saddlebag to be removed or at least pulled out of the way.

Remove the bolt holding the support bracket that surrounds the rear line connection. Unfold the support bracket and remove it from the brake line. Next, remove the banjo bolt and then unscrew the old line from the ridged steel line it is connected to. (Use the proper wrenches)

Install the banjo end of the stainless steel line first using new crush washers and the existing banjo bolt; tighten firmly. Then connect the other end to the ridged steel line, install the support bracket and bolt the assembly to the frame. (**See Photo I.**)

Before you put all the body panels back on the bike, bleed the brakes. Trapped air can be bled out by tapping lightly on the calipers and master cylinders with a rubber hammer or a soft block of wood as you go. When doing the foot brake, make sure to bleed the front left caliper first, then the rear caliper. When done properly, the brake pedal and lever will be very firm and will not take much squeezing or depressing to actuate the brakes.

Check all connections for leaks, make sure there are no kinks in the lines, and wipe up any brake fluid drips before re-installing all of the body panels.

A word of caution. If you are not familiar with brake functions and service techniques, have a professional do this installation. You can't afford the

consequences of improper brake work. Once your new stainless steel lines are installed, take some practice time to get used to the feel and performance of your new brakes. As I said earlier, the tool is nothing without the craftsman.

### **Honda GL1500 Stainless Steel Brake Line Installation Tips**

- Use a 10mm brake line wrench (also called a open flare nut wrench) in combination with a 17mm open-end wrench to loosen OEM connection between rubber lines and hard steel lines.
- To loosen the OEM connection between hard lines and rubber lines, first tighten the connector slightly, and then loosen.
- When reconnecting OEM hard lines to new stainless steel lines, hand tighten connectors first. Use wrench to do final tightening only. This will keep you from cross threading the connectors.
- Clean all connectors thoroughly before connecting.
- Connect the banjo bolt to the caliper before connecting the OEM hard line to the female connector on the new, long, rear line.
- On the rear pedal, bleed the front left caliper then the rear caliper, and then repeat.
- Bleeding the system requires fluid to be drawn into the new lines before bleeding can be done.
- To do this, after the lines are installed, attach a 5'-6' piece of clear plastic tubing to the bleed nipple on the caliper and suck the fluid through the new line and partially up into the clear line. Take care not to ingest any brake fluid. Bleeding can now be done any way you choose. (Note. A Mighty Vac usually will not draw enough fluid through the new empty lines to fill them)
- If you do not draw fluid into the lines before bleeding you will have a very hard time bleeding the lines.
- It is not unusual to use a quart of fluid to full bleed the brake system.
- Tap the calipers with a plastic hammer or piece of wood while bleeding to shake loose air bubbles.
- Do not over tighten the bleed nipples when you tighten them up. Over tightening can damage the seat/seal and cause air leaks.
- Keep brake fluid from contact with painted or plastic surfaces.