INSTRUCTIONS FOR INSTALLING GALFER BRAKE LINE KIT FK003D425-13 ON 2002-2007 HONDA VFR 800/INTERCEPTOR WITH ABS

Must have items:
Torque wrench, line wrenches, a commercially available vacuum/pressure bleeder for brake systems, replacement DOT 4 brake fluid, shop towels, general assortment of metric tools.

NOTE: THIS IS A TIME CONSUMING TASK REQUIRING KNOWLEDGE OF THIS MOTORCYCLE'S BRAKE SYSTEMS, MECHANICAL ABILITY, AND THE USE/OPERATION OF SPECIALIZED TOOLS. HAVING THE FACTORY HONDA SERVICE MANUAL FOR THIS MOTORCYCLE IS VERY HELPFUL.

I. Prep the motorcycle for this job
   A. Park motorcycle on the center stand in a well-lit shop (Fig A)
   B. Note: it is not absolutely necessary to remove the fuel tank and body panels. However, brake fluid is VERY CORROSIVE TO PAINT. We decided to be safe (Fig. B) and removed the lower fairing left and right rear sides, fuel tank, front fender, seat, and black plastic inner fairing front parts, battery cover, and rear master cylinder cover according to the owner's manual. This also gives better access to the fittings. (Fig C)
   C. After safely storing the body panels and fuel tank, remove wind shield, (brake fluid, even a drop, will permanently mark any clear plastic), cover the dash and all gauges with a towel.

II. Draining the brake fluid from the systems.
   A. Please refer to the factory instructions on how to properly and safely drain, fill and bleed the brake fluid from the brake systems. Follow the directions closely and remove the fluid according to the instructions. Dispose of the old fluid properly ---DO NOT REUSE.

III. Perform the following steps for the clutch line (Fig D)

A. In the bag marked <u>Clutch Line:</u> remove the left side lower body panels. Remove vehicle speed sensor, and remove the coolant tank. Remove the clutch fluid from the master cylinder on the left clip-on. Remove the fluid from the clutch line and slave cylinder. This factory line is **NOT** attached along the inner frame spar so here is a little trick that made this a 20-minute job including the bleed:

1. Remove the banjo bolts from the master cylinder and the clutch slave ends.
2. With a nice heavy wire tie, attach the slave end of the new braided line to the lever end of the factory line. Snip off the tail of the wire tie. Wrap this "joint" with electrical tape.
3. Pull from the factory slave end until you get the braided line end to the clutch slave. If it gets caught on something, try turning the end you are pulling from.
4. Remove the tape, carefully cut off the wire tie, install new sealing washers and bolts at both ends and torque to 15 - 17 foot/lbs. maximum. Bleed the clutch.


C

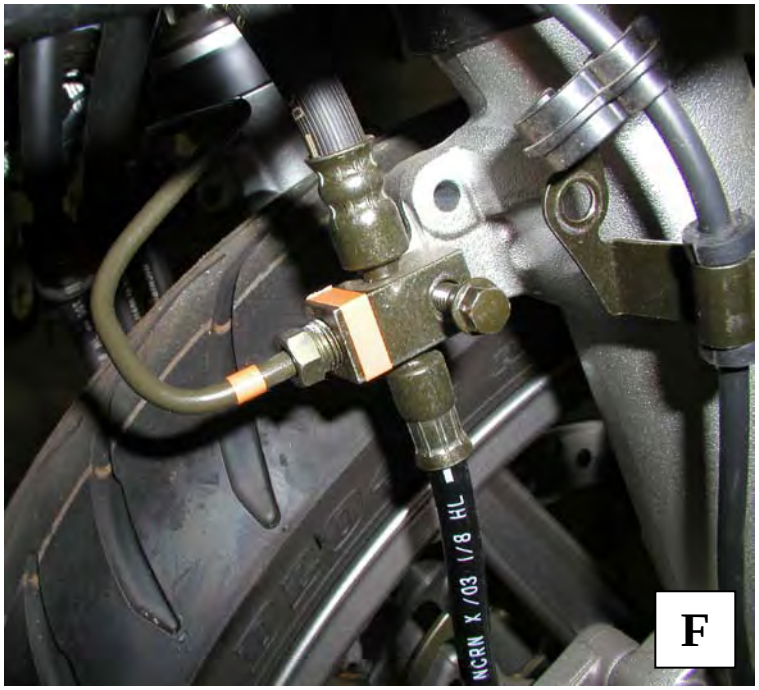

D

IV. Removing the factory front brake hoses and calipers – Front lines

A. With the fluid drained and disposed of properly, loosen the bolts that hold the right caliper to the right fork leg (Fig E). Also remove the two 8mm bolts from the ABS front


E

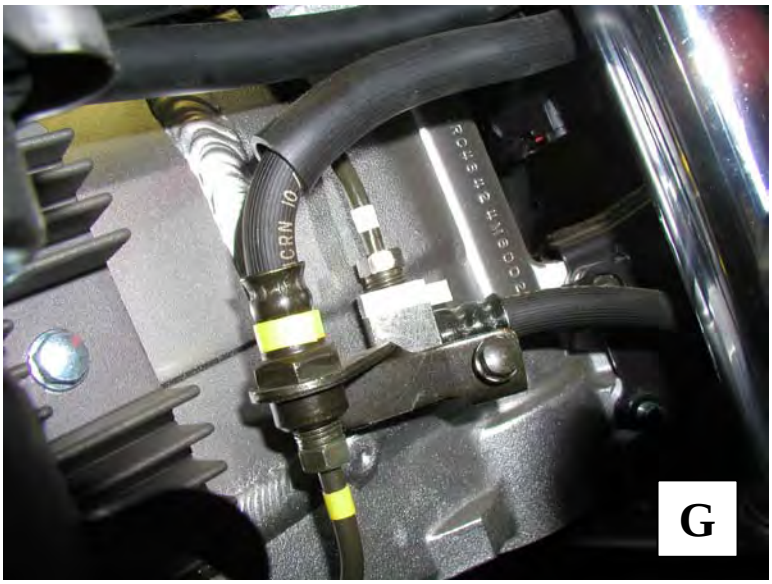
wheel speed sensor. Loosen all of the hose mounting blocks on the front forks on both sides; also loosen the blocks for the crossover pipe (Fig F) between the fork legs. Also loosen the frame pipe mounts and the mount for the front lever line that is also attached to the right side of the frame. Loosen the left caliper mounting bolts (Fig G).



F

B. Remove the calipers and remove the hose mounts under the lower triple tree. Remove the hard pipes from both the left and right hard pipe to the soft line frame mounts (Fig. H). On the front ABS modulator remove the short soft line that is connected to the mount block. (Fig I and reference Fig G)

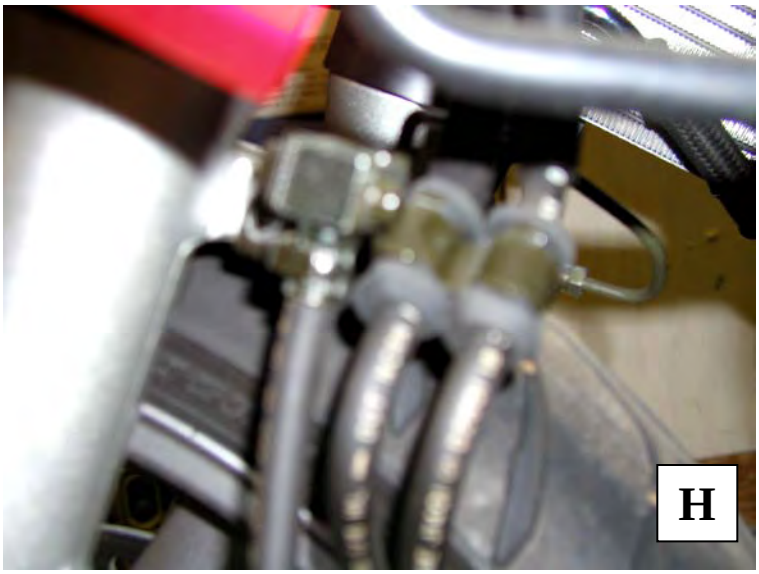
C. Carefully remove the entire assembly…both calipers, all of the lines and all of the block mounts. Remove the lines from the calipers. (Fig. J-1 & J-2)



G

V. Installing front braided lines (Fig. K-1 & K-2)

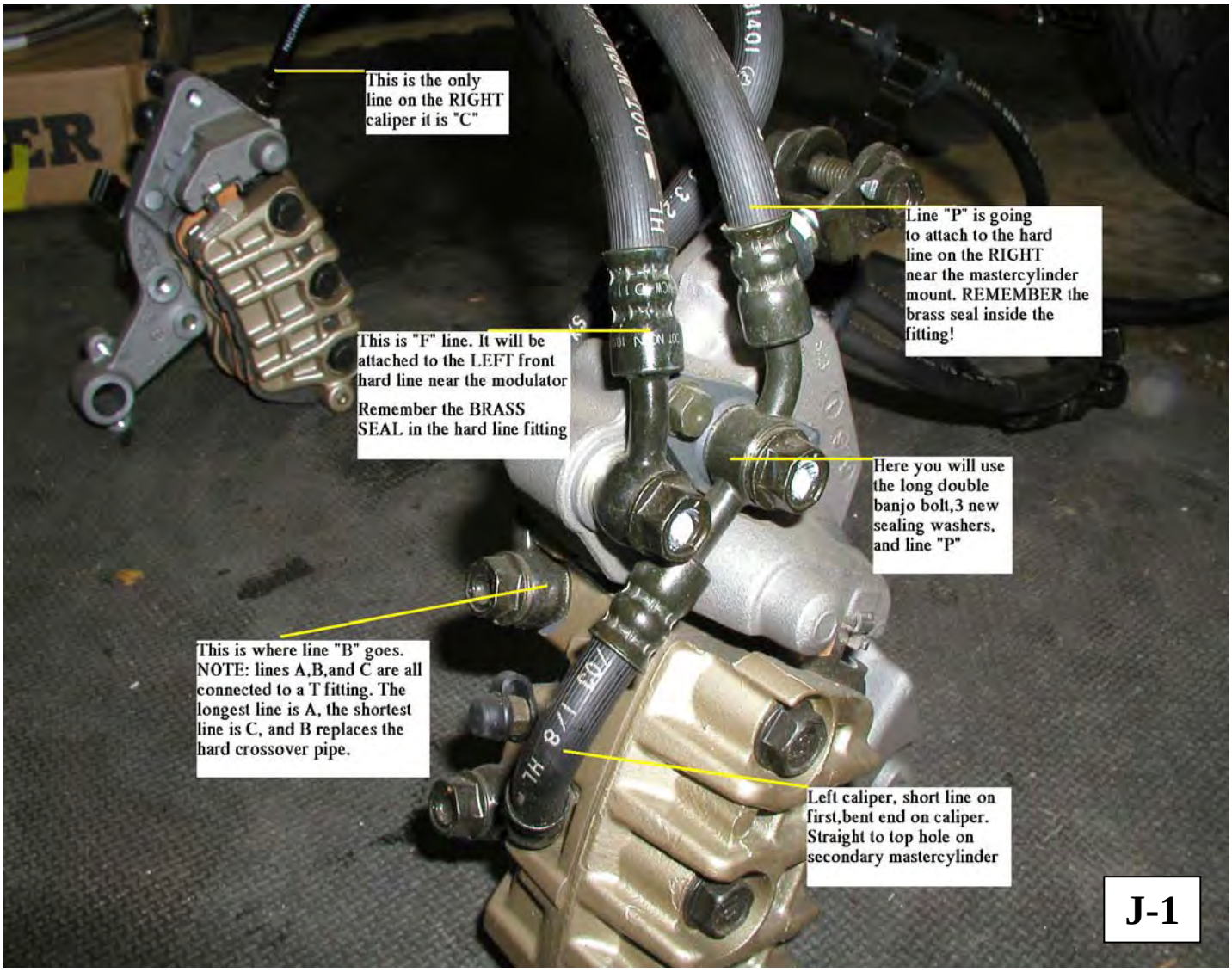
A. In the front line set is a group of four lines. In a bag marked <u>Front Lines;</u> the A, B, C line assembly is first. Attach the long end to the front modulator **(A)**. (Fig. L) Loosely remount the calipers on both fork legs. The line end with the "T" goes to the right caliper **(C).** Loosely attach the line using two new washers and a new banjo (or as Honda calls them, "Oil Bolt") bolts. The other long end off of the "T" is actually the line that jumps over the front fender between the forks. This line was made to not make contact with the front fender. You may at this time loosely install the front fender. Attach the line marked **(B)** to the left caliper upper line mount. Again use two washers and a new


H

bolt. Do not tighten. (reference Fig J-1)

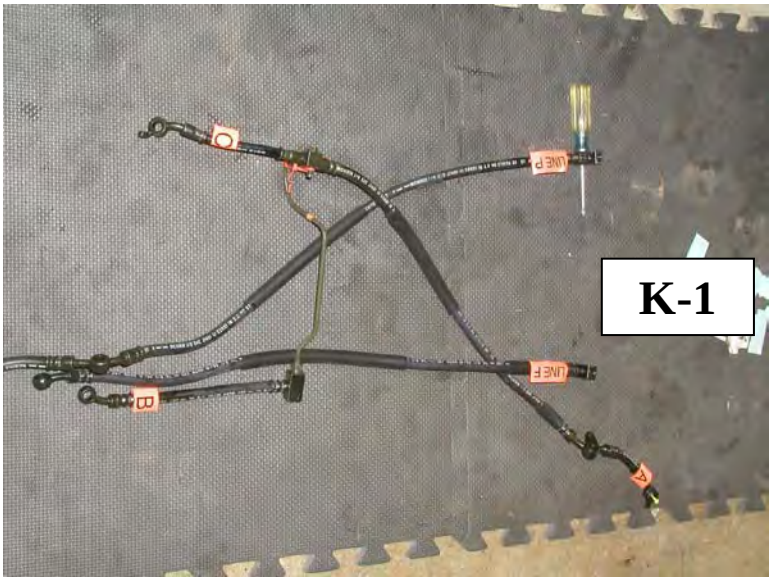
B. The next lines will be from the hard line fittings on the front, both sides of the frame, from the right side hard line fitting, install one of the small brass disc seals (Fig M) and start the hard pipe threaded fitting into the line end. Do not tighten. This line is marked **(P)** and goes to the front hole on the secondary master-cylinder on the left fork leg. This hole also gets the short "jumper line" to the lower hole on the same side caliper. Use the double banjo bolt and three sealing washers, in this order, against the caliper: washer, short line, washer, "P" line end, washer, and bolt. The loose end of the short line can now be attached to the lower caliper hole. (Fig N-1 & N-2)

C. The last line from the left front frame mount area is marked **(F)**. Again, use a seal disc

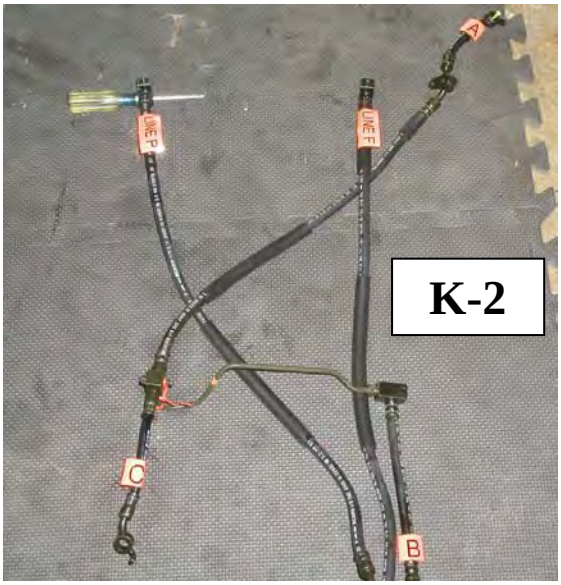


(brass) and start the line (See Fig M). This line goes to the rear hole on the secondary master cylinder. NOTE: It is a good idea not to torque the lines on the calipers yet because you may need to re-route them for a cleaner look. With a few black wire ties, tie the lines (Fig O-1 & O-2) loosely under the oil cooler, as the picture demonstrates. (Fig P) The way they were done in the picture had none of the lines rubbing on anything…even with the steering locked left to right. When you are happy with the routing, tighten and torque all of the fittings. Use line wrenches to tighten the hard line to braided fittings on both sides of the frame. (Fig Q) Torque the banjo bolts. The maximum torque for the banjo bolts is 15-17 ft/lbs. DO NOT EXCEED THE TORQUE VALUE!!! It may be necessary to remove the left caliper to torque the banjo bolts that face into the wheel.


J-2

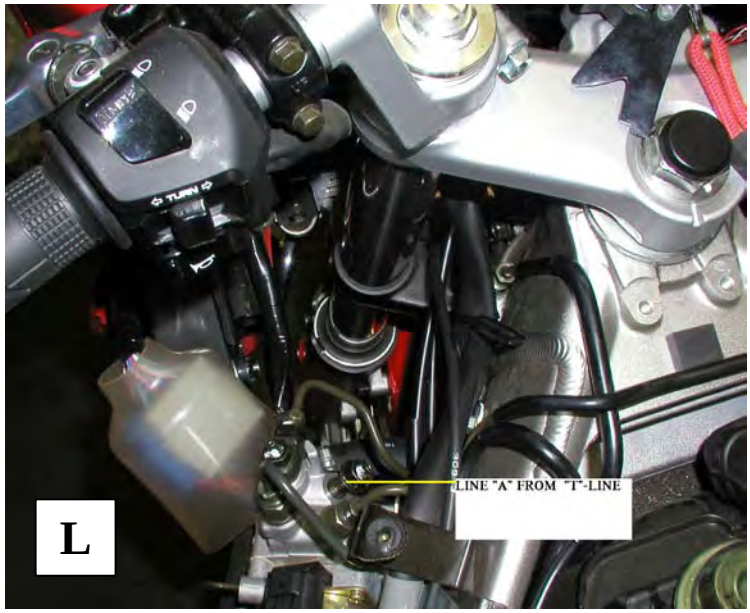


K-1

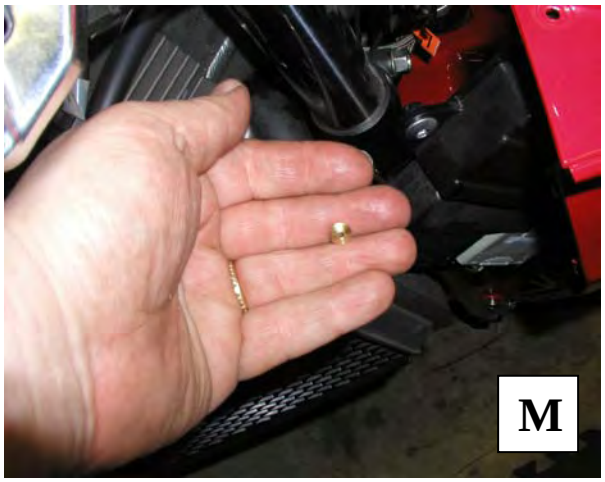


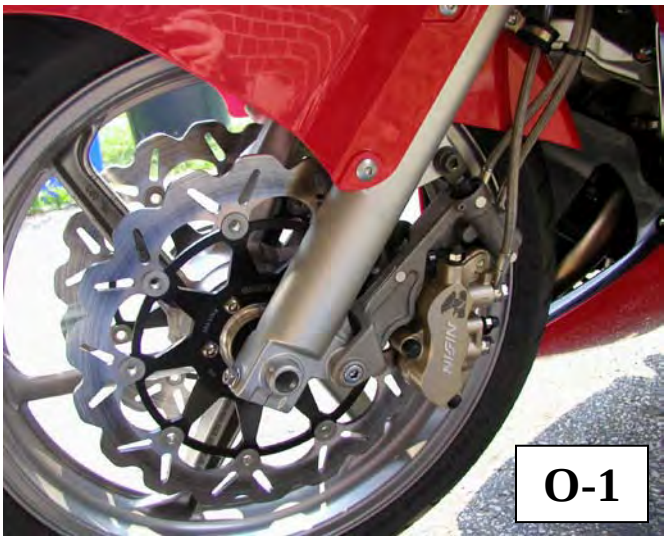
K-2

D. The last front line is the **(L)** line (for lever). This line (Fig R) attaches to the lever master cylinder on the right clip-on, and then attaches to the hard pipe. Also install the ABS sensor and re-torque the caliper bolts to 23 ft/lbs as per the factory Honda directive.

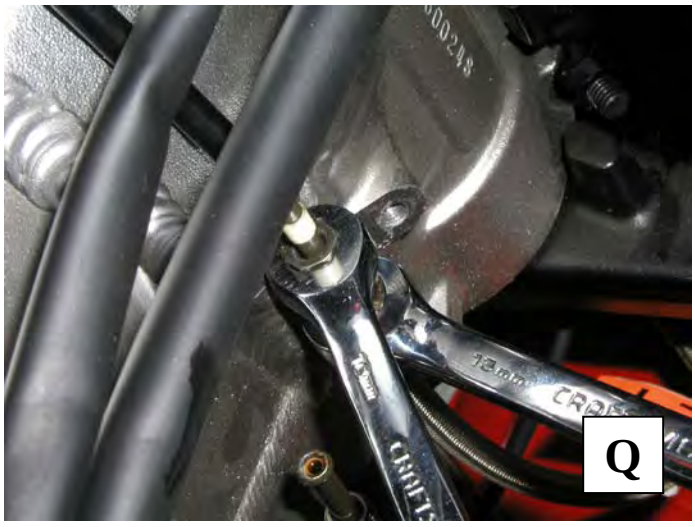


L

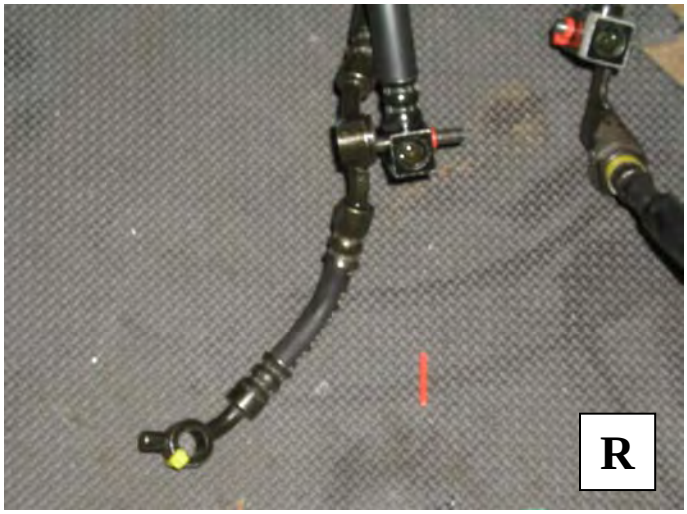




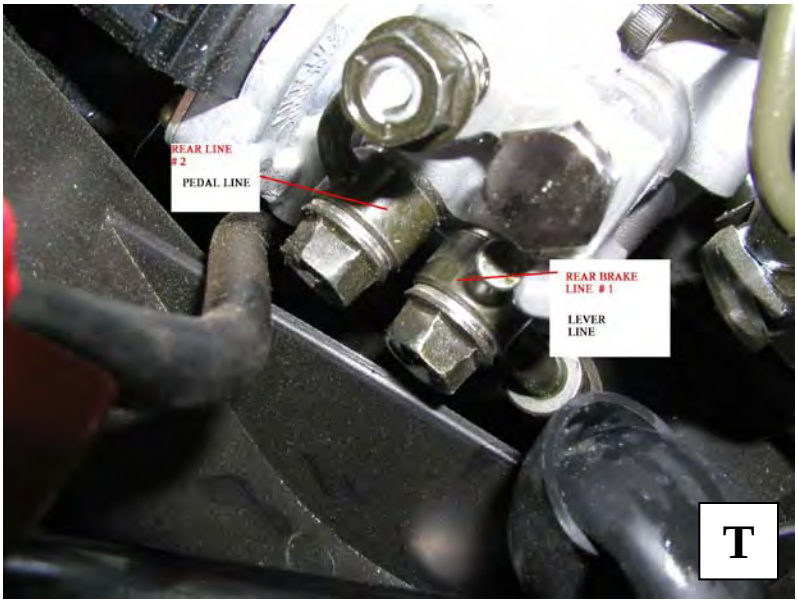
VI. Rear factory Line removal including modulator, lines, pedal line, rear caliper lines and rear proportional control valve, rear modulator.

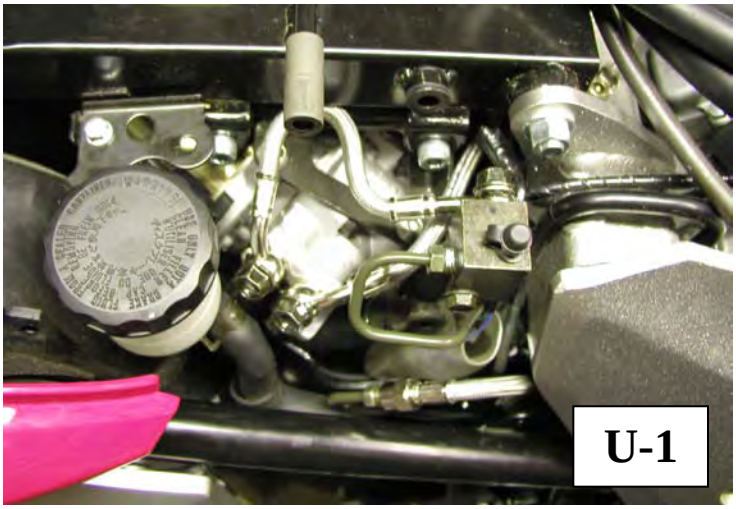


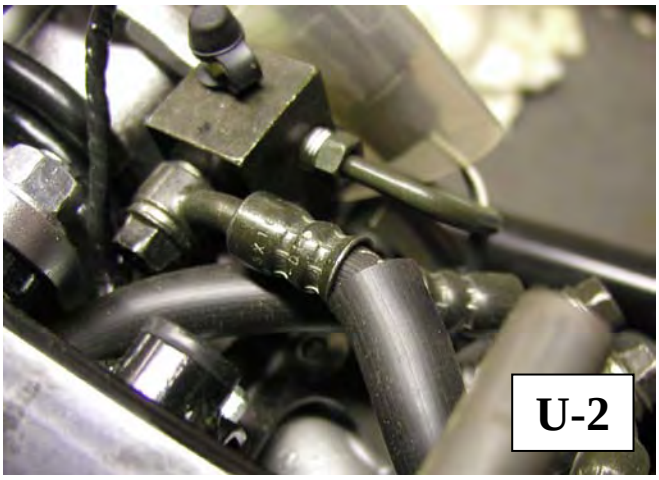
A. WE DID NOT FORGET TO ADD BRAKE FLUID OR BLEED THE SYSTEM. This is a linked brake system and must be bled when the line installation is complete. Open the bag marked Rear Lines.
B. Loosen and remove the factory line from under the servo proportional control valve bleeder (Fig S). Loosen it from the rear ABS modulator unit. (Fig T)
C. Install the braided line in its place.
D. Remove the short factory line on the rear ABS modulator unit that goes to the pedal bleeder block. (Fig U-1 & U-2)
E. Install the braided line in its place.
F. Torque these two lines to 15-17 ft/lbs. NOTE: The servo proportional bleeder gets torqued to 25 ft/lbs, as per the factory Honda directive. (refer to Fig S)
G. Pedal line: remove the line from the foot pedal master cylinder. Remove the pedal block, but leave the bent hard line. (Fig V) Install the braided line and a brass sealing disc to the hard line. Tighten with a pair of line wrenches. Torque to 15-17 ft/lbs. at the master cylinder end.

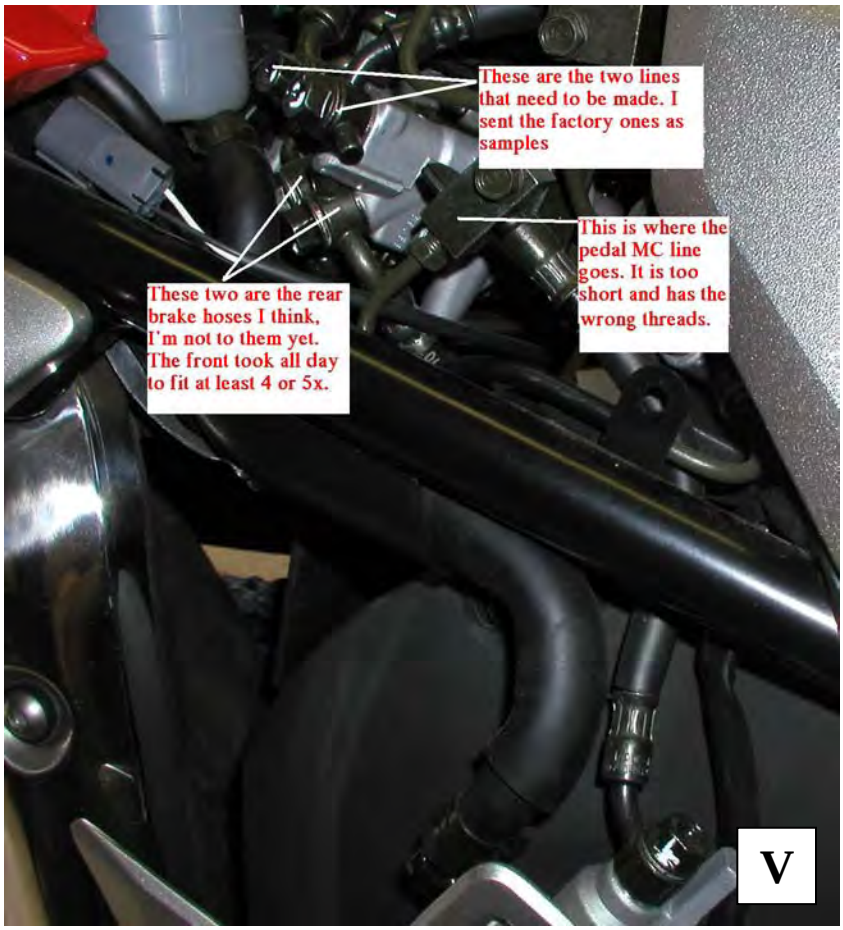


VII. Rear brake caliper lines.







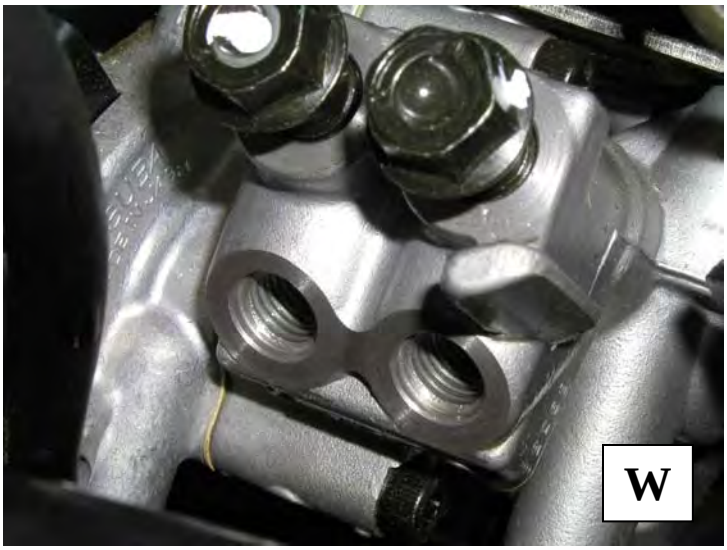


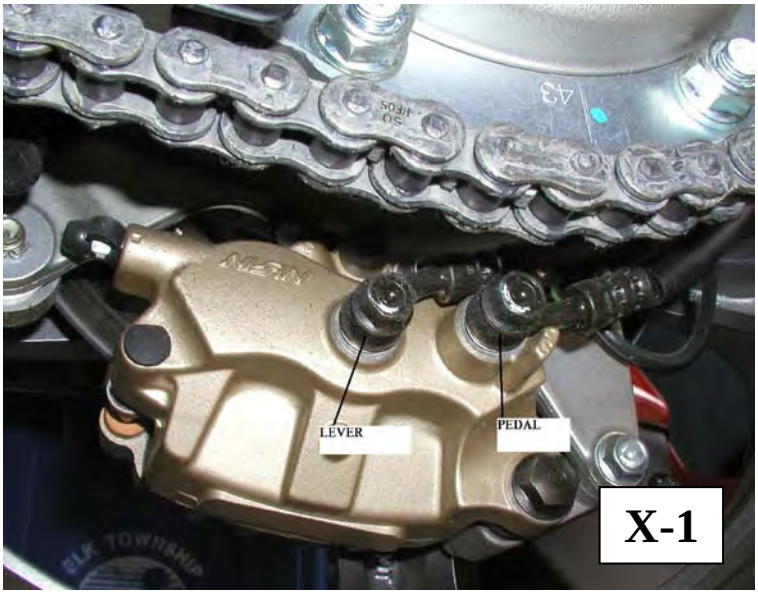
A. The rear caliper has a pedal line and a lever line. The rear ABS modulator unit is where both of these lines go. While looking at the rear ABS modulator from the brake pedal side of the motorcycle you will see the modulator with four lines on it. The two top holes have the lines you previously replaced. (Fig W) The two lower ones are for the rear caliper.

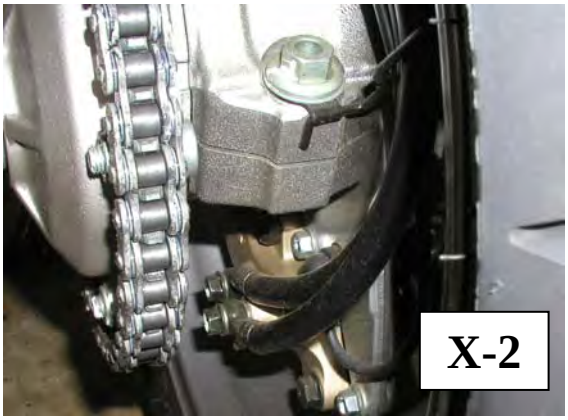
B. Loosen and remove the lower two banjo bolts from the rear ABS modulator unit. An easy way to remember which line is lever and which is pedal is to either mark the casting with a marker or just remember the front hole is for the front lever and the rear hole is for the rear pedal. The same is true while you're looking at the rear caliper, two holes…front hole = lever, rear hole = pedal. (Fig X-1 & X-2)

C. With the bike on the center stand, remove the rear wheel. Remove the ABS sensor from the rear caliper mount. Follow this sensor wire along the chain guard and up through the rear shock area. Unplug the wire from the connector. Remove the caliper banjo bolts. Also remove the driver's foot peg and spring loaded mount from the frame. Remove the

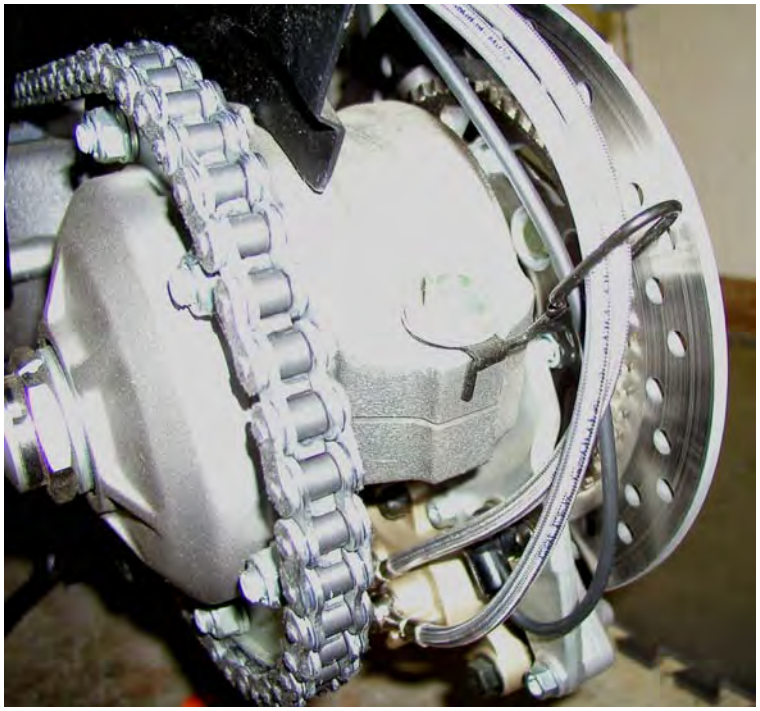
chain guard from the swing arm. If you look behind the shock mount you will see a dual line mount. Remove the bolt and remove the two factory lines, and ABS rear wheel speed sensor and the chain guard as a unit. (Fig Y)

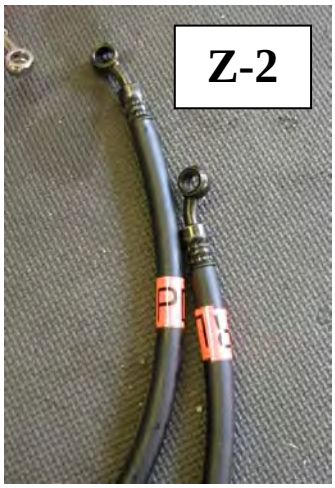






D. With a piece of masking tape and a marker, mark both ends of lines **P** and **L** from the bag marked <u>Rear Lines</u>. Lay out the braided lines and the rear wheel speed sensor along the chain guard and remount the holder (Fig Z-1 & Z-2), with the new lines and wire to the chain guard. Drop the lines through the swing arm line retainer loop and install the lines to the caliper. **L** line in the forward most hole and **P** line in the rear hole (See Fig X-1). Don't forget the sealing washers and torque to 15-17 ft/lbs. Remount the ABS rear wheel speed sensor (wire pointing down). At the rear ABS modulator unit install the braided line marked **L** in the forward lower hole of the modulator and the line marked **P** in the rearward lower hole. Install new sealing washers and re-torque to 15-17 ft/lbs.





DO NOT RE-USE THE OLD FLUID!!!

YOU ARE NOW READY TO FOLLOW, WORD FOR WORD, THE FACTORY PROCEDURE FOR BLEEDING THE BRAKE SYSTEM.

Note: After bleeding is completed and the motorcycle test ridden, sometimes it is necessary to re-bleed the system a short while later just to remove any air that worked its way into the bleeders. This is not always the case, but the system was completely drained, and it is just a good preventative measure to take. Any questions or concerns please call our tech department – 1800-685-6633