

## INSTALLATION PROCESS:

### FK003D323-11 Front, Rear and Clutch Brake Line Kit

1997-2003 Honda CBR1100XX Blackbird



#### Step 1:

Identify the key components that complete our brake line kit:

You should have eight (8) single lines, one (1) 3-line assembly, one (1) double banjo bolt, thirteen (13) single banjo bolts, two (2) conic “olive” inversors and two (2) c-clips. We have also included a total of thirty-four (34) washers; thirty-two (32) will be used, and two (2) will be spares. We strongly suggest having a professional mechanic install your brake lines, all other installs may void your warranty.

#### Step 2:

Familiarize yourself with the new Galfer brake lines, each is labeled for application. The 3-line assembly, labeled **A, B and C**, along with Lines **D, E, F, G, and H** will replace the front OEM hoses. Lines **J and K** will replace the rear hoses and **Line I** is for the clutch. *Please read through the instructions before installing the lines.*

#### NOTES:

- *We refer to right and left as if you are sitting on the motorcycle. For example; the “right” caliper is on your right when sitting on the bike.*
- *All female ends require a brass conic inversor, more commonly referred to as an “olive.”*
- **Torque all stainless steel bolts down between 15 – 17 ft pounds, all female ends to 5 ft pounds.**

#### Step 3:

To ensure there is no paint damage from the brake fluid, completely cover the bike. Installing brake lines can be a messy process, and brake fluid *WILL* spill!

#### Step 4:

Bleed and dry out the complete OEM brake system. Take note of how the stock system was routed in case you need to re-install the hoses, *you may want to take pictures to use as reference.*

#### Step 5:

Remove the stock hoses on the front of the motorcycle, these will be replaced with the Galfer lines labeled **A, B, C, D, E, F, G, H**, and the clutch **Line I**. Locate **Line A**, this is the top line of the 3-line assembly. Install **Line A** to the front master cylinder using a single banjo bolt and two (2) washers, the sequence will be as follows; master cylinder, washer, banjo fitting, washer, banjo bolt (**refer to picture A.**) **Line A** is to be routed under the throttle cables and in front of the lower triple tree (**refer to picture B.**) Install the t-block connecting **Line A & B** to the right caliper delay valve using the **OEM bolt** (**refer to pictures C & D.**) Install **Line B** to the top position of the right caliper using a single banjo bolt and two (2) washers, be sure to use the same sequence as the master cylinder (**refer to pictures D & E.**) Locate **Line D**, using one (1) “olive” inversor, install the female end to the **OEM tubing** located on the right above the lower triple tree (**refer to picture F.**) Route **Line D** in front of the lower triple tree and install the banjo fitting to the top position of the right caliper delay valve using a single banjo bolt and two (2) washers (**refer to pictures D, G & I.**) Use one (1) Galfer provided c-clip and **OEM bolt** to retain **Line A & D** to the lower triple tree (**refer to pictures G & H.**) Locate **Line E**, install this line to the lower position of the right caliper delay valve using a single banjo bolt and two (2) washers (**refer to pictures E & I.**) Install the other end to the right caliper also using the same sequence (**refer to pictures E & J.**)

#### Step 6:

Identify **Line C** (part of the 3-line assembly,) and lines **F, G, & H**; these lines will be installed to the left caliper and secondary master cylinder, you may want to prepare to uninstall the secondary master cylinder to help ease installation of the Galfer lines. Locate **Line G**, install the male end to the right caliper delay valve, this line will crossover the fender towards the secondary master cylinder at the left caliper (**refer to picture K.**) Identify **Line H**; **Lines G & H** are to be installed to the side of the secondary master cylinder using a double banjo bolt and three (3) washers, the sequence will be as follows; secondary master cylinder, washer, **Line G banjo**, washer, **Line H banjo**, washer, double banjo bolt (**refer to pictures L, M & N.**) Locate **Line C**, this line is to crossover the fender towards the left caliper (**refer to picture K.**) Install **Line C** to the top position of the left caliper using a single banjo bolt and two (2) washers, the sequence will be as follows; left caliper, washer, banjo fitting,

washer, single banjo bolt (refer to pictures M, O & P.) **Line H** is to be installed to the lower position of the left caliper, also using a single banjo bolt and two (2) washers (refer to pictures M & O.) Locate **Line F**, using one (1) “olive” inverter, install the female end to the **OEM tubing** located on the left above the lower triple tree (refer to pictures Q & R.) Route **Line F** in front of the lower triple tree, using a Galfer provided c-clip to retain this line at the triple tree (refer to pictures H & R.) Install the banjo fitting of **Line F** to the top position of the secondary master cylinder using a single banjo bolt and two (2) washers (refer to picture L.)

#### **Step 7:**

Locate **Line I** and identify which end to install at the clutch master cylinder. Install this end using a single banjo bolt and two (2) washers (refer to picture S.) Route this line towards the slave cylinder using the **OEM routing** and **line holders** (refer to pictures B & T.) Install **Line I** to the slave cylinder using a single banjo bolt and two (2) washers (refer to picture U.)

#### **Step 8:**

Remove the stock rear caliper hoses from the motorcycle, these will be replaced with the Galfer lines labeled **J & K**. Locate **Line J** and identify which end to install at the rear master cylinder. Install this end using the **OEM double banjo bolt** and three (3) Galfer washers, the sequence will be as follows; rear master cylinder, washer, **OEM tubing & banjo** fitting, washer, **Line J banjo** fitting, washer, **OEM double banjo bolt** (refer to picture V.) Route the line down the swing arm and towards the rear caliper using the **OEM line holder** (refer to picture W.) Install **Line J** to the second position of the rear caliper using a single banjo bolt and two (2) washers (refer to pictures X.) Identify **Line K**, using a single banjo bolt and two (2) washers install the appropriate end to the rear proportioning valve located above the rear master cylinder (refer to picture Y.) Route the line down the swing arm similar to OEM and reusing the **OEM line holders** (refer to picture W,) install **Line K** to the first position of the rear caliper using a single banjo bolt and two (2) washers (refer to picture X.)

#### **Step 9:**

Before you begin the next step, please check the clearance of your new lines. When the front and rear end is fully extended or compressed, make sure the lines do not bind with anything. Be sure to triple check that the lines are traveling correctly and are clear from any obstructions.

#### **Step 10:**

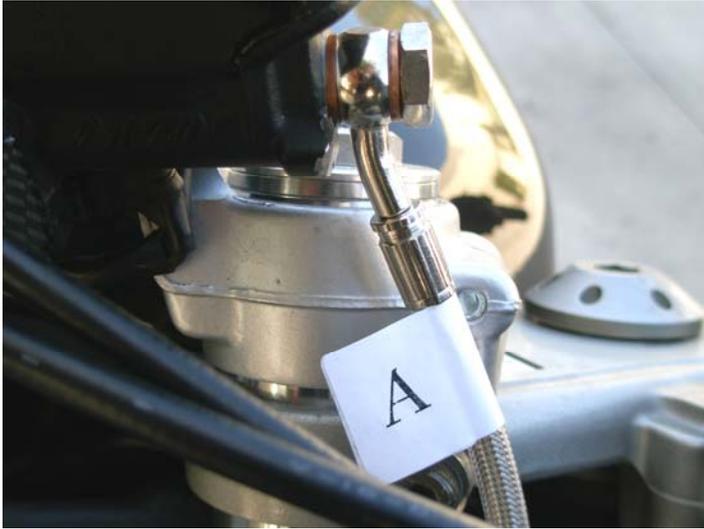
Bleed your brake system according to the owner’s manual. Add Galfer DOT-4 brake fluid to the system and build appropriate pressure.

#### **Step 11:**

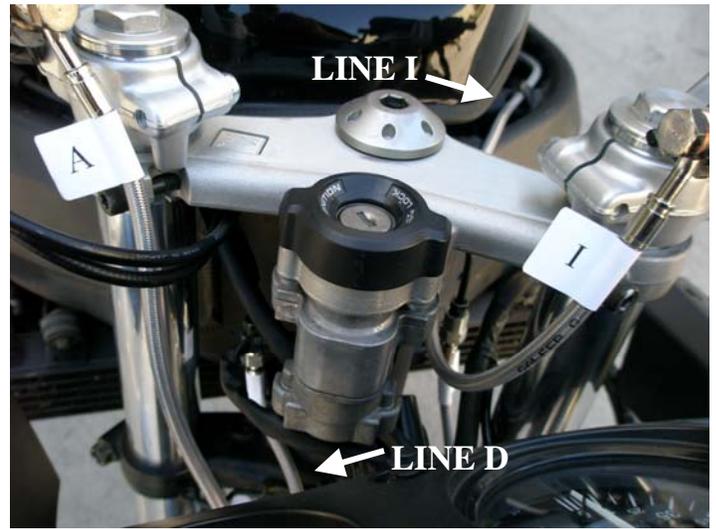
Once you have bled the system, please check the brake fluid level in your master cylinder. Top off your brake fluid according to your manual and close the brake fluid reservoir. To ensure there are no leaks or other issues, zip-tie the brake lever to the throttle, and the clutch lever to the handle bar for at least 2 hours, for rear; use a jug or something similar to apply pressure to your brake pedal. If the lines are not leaking and all else looks good, (bolts are tight and torqued down to specification, washers are in place, and lines are clear from obstruction) you are now ready to ride with the new brake system.

Please be aware that the overall braking feel has been changed dramatically. We suggest taking it easy while you get used to the new brake lever pressure and feel. We recommend checking your brake system periodically; be sure to check that your bolts are tight and **VERY** carefully check your lines for any leaks or damage. If there are any signs of damage or stress to the lines, the complete brake line kit will need to be replaced. Remember, our brake lines have a **LIFETIME WARRANTY!** If you have any problems or questions, do not hesitate to call our tech department - **(800) 685-6633**.

  
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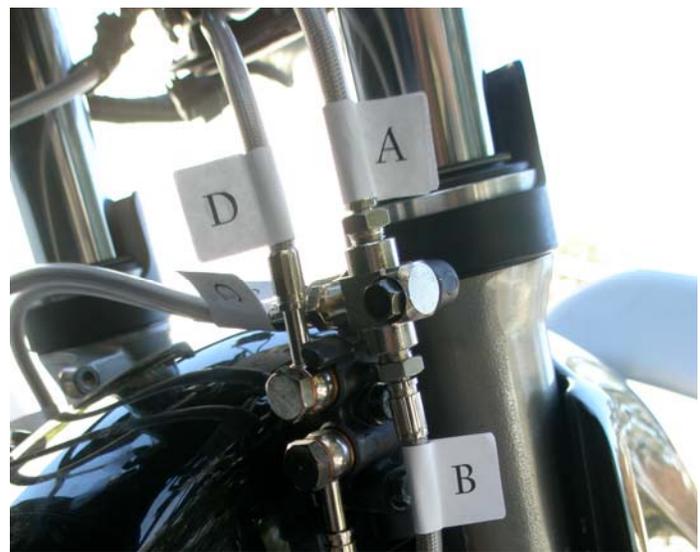
**a. Line A at front master cylinder**



**b. Line A at front master cylinder & Line I at clutch master cylinder**



**c. Lines A, B, D & E at right caliper delay valve**



**d. Lines A & B t-block and Line D at right caliper delay valve**

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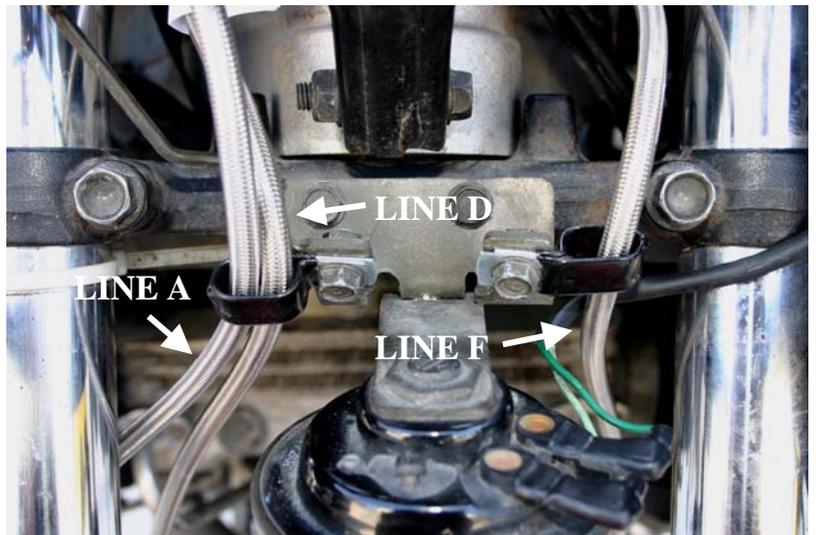
**e. Lines B & E from delay valve to right caliper**



**f. Line D female end at OEM tubing**



**g. Lines A & D routing in front of the lower triple tree**



**h. Lines A, D & E routed through Galfer c-clips at the lower triple tree**

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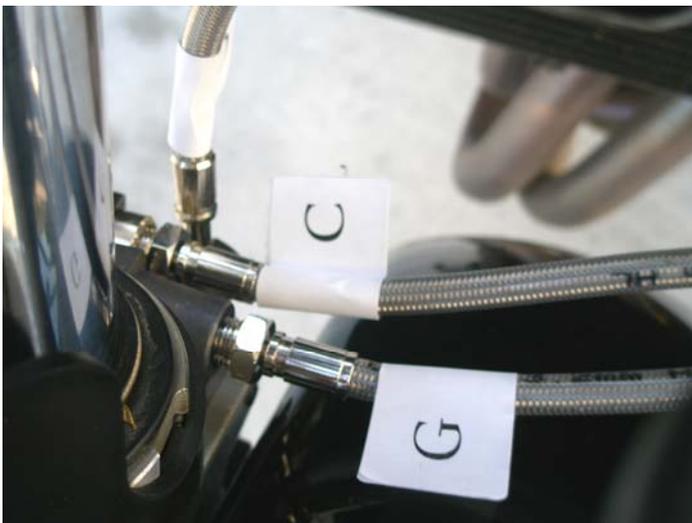




**i. Lines A, B, D & E at right caliper delay valve**



**j. Lines B & E installed to right caliper**



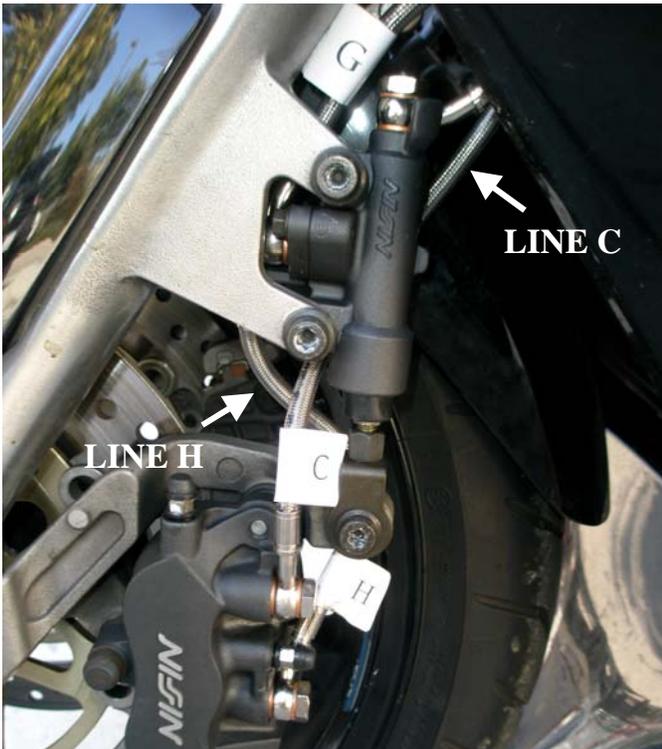
**k. Lines C & G crossover lines at right caliper delay valve**



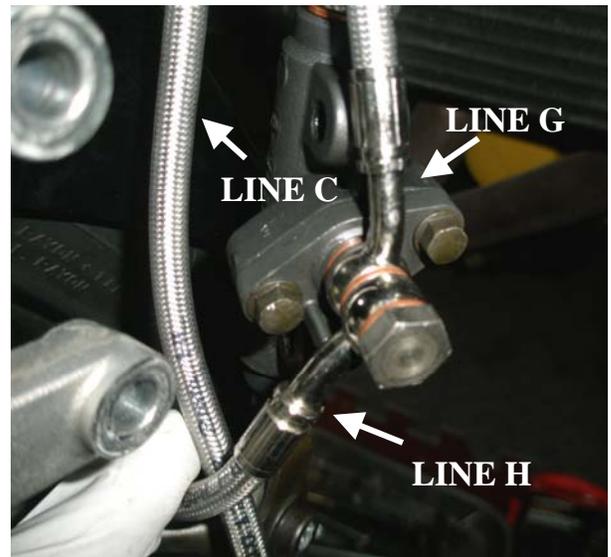
**l. Line F installed at left caliper secondary master cylinder  
Line G routed behind**

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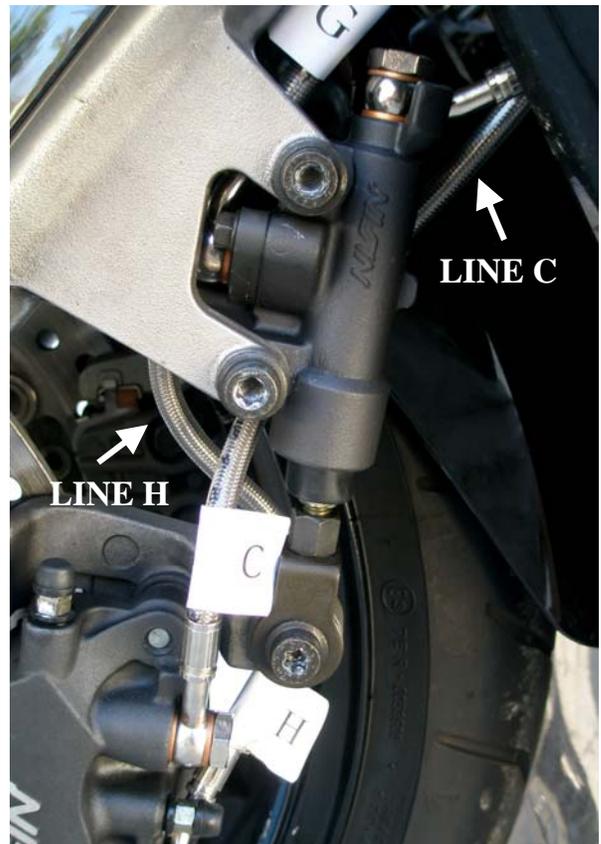
**m. Lines C, F, G & H at left caliper and secondary master cylinder**



**n. Lines G & H at secondary master cylinder unit (with unit uninstalled)**



**o. Lines C & H at left caliper**



**p. Lines C, F, G & H at left caliper and secondary master cylinder**

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**q. Line F female end at OEM tubing**



**r. Line F routed in front of the lower triple tree**



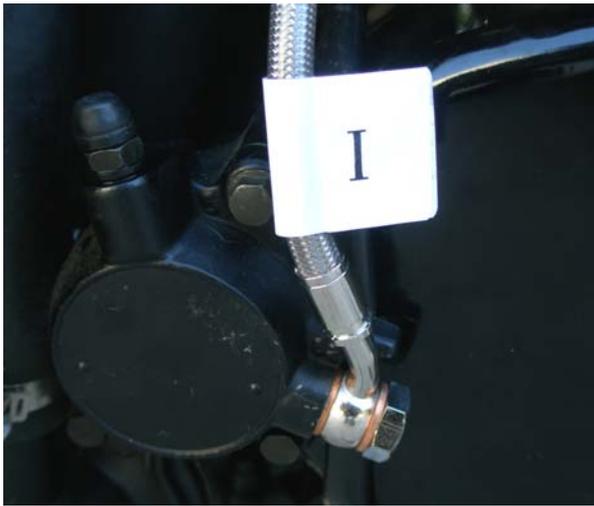
**s. Line I at clutch master cylinder**



**t. Line I re-use OEM routing tabs**

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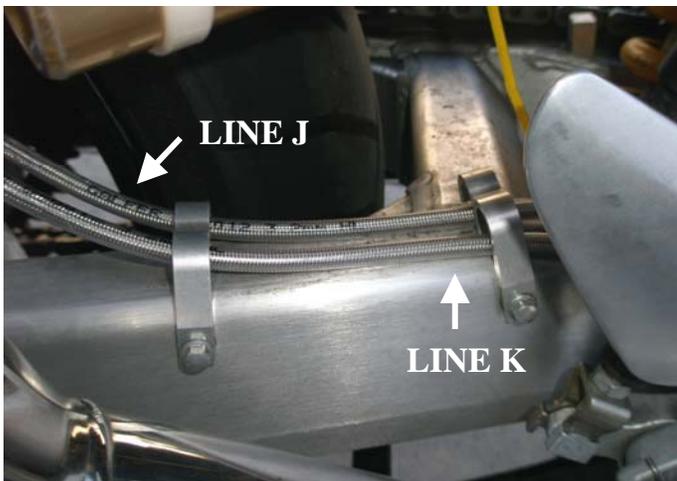




**u. Line I at slave cylinder**



**v. Line J at rear master cylinder with OEM tubing and bolt**



**w. Lines J & K at swing arm**



**x. Lines J & K at rear caliper**



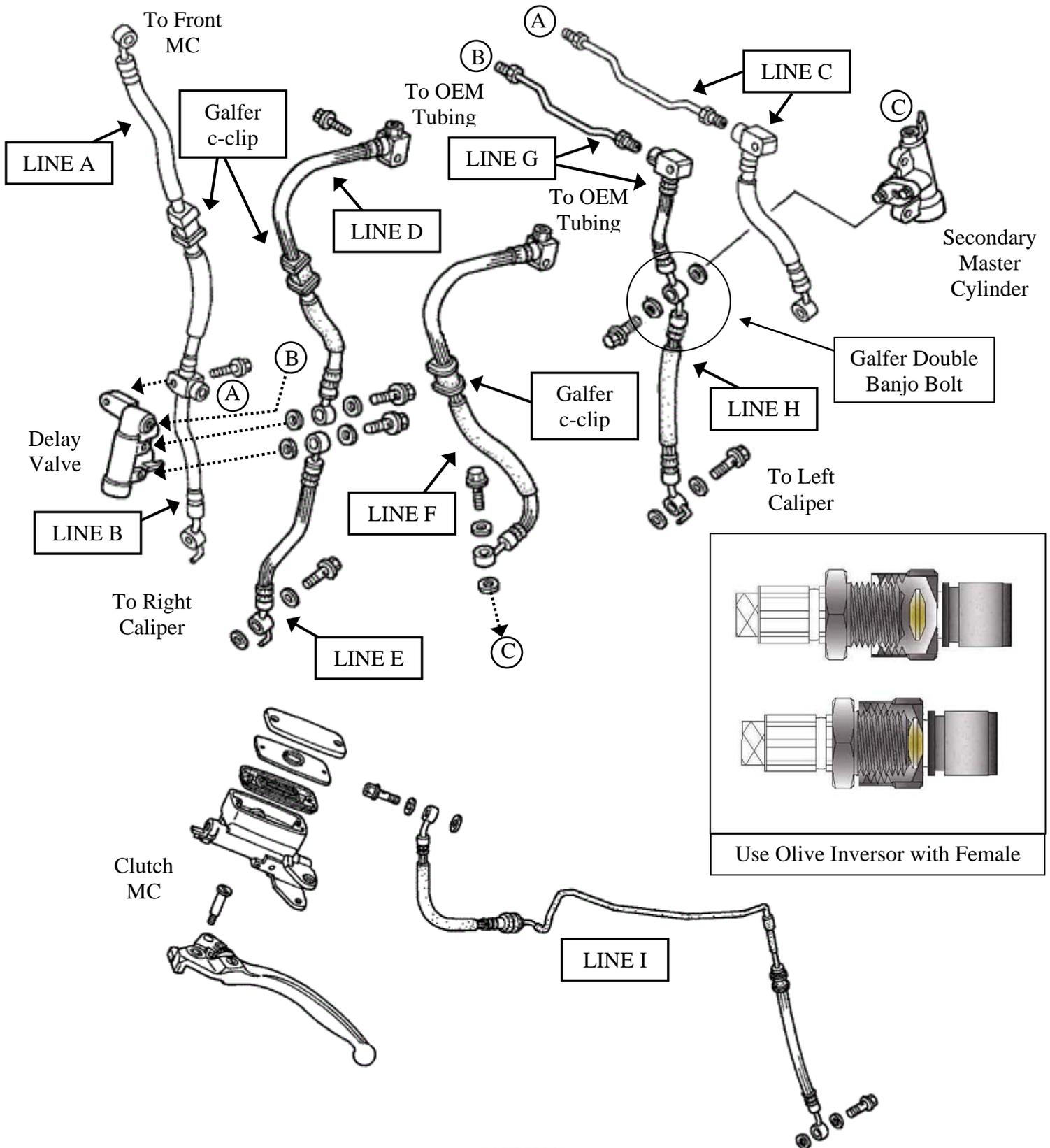
**y. Line K at rear proportioning valve**

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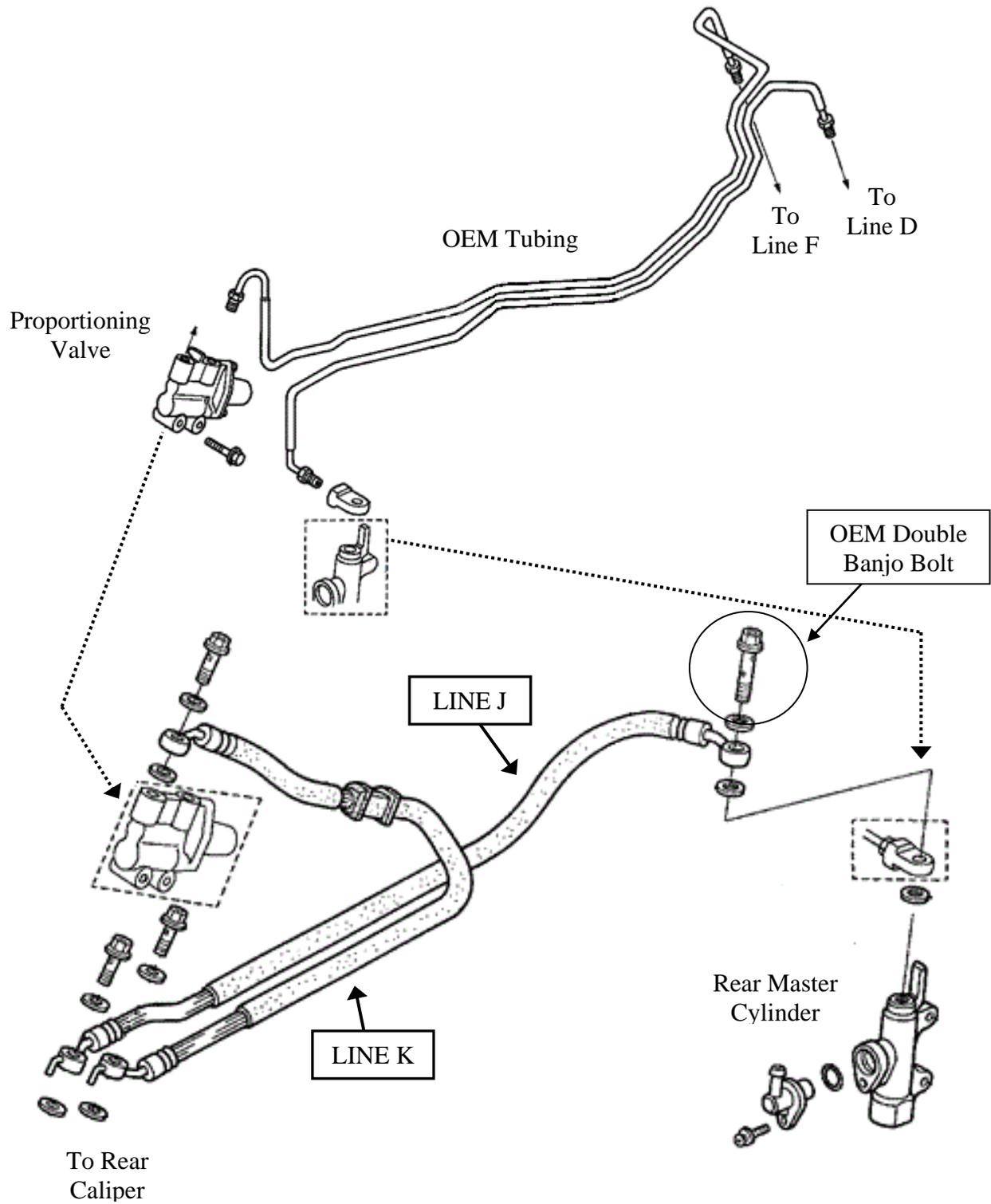


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