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Manufacturers and Distributors of quality chassis,
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Part # 4103 Brake Line Kit

Parts List:

- | | |
|--|---|
| 1...20' - 3/16" Steel Brake Line (C/E4105) | 1...4' - #3 Teflon Brake Line (H/F1307) |
| 3...-3 to -3 Brake Lines with Fitting (H/F 1910) | 4...3/8" Jam Nut (ABT 1640) |
| 4...Chassis Tabs (C/E 3893) | 14...#3 Tube Nut (H/F 1002) |
| 14...#3 Tube Sleeve (H/F 1003) | 12...#3 to 1/8" Pipe Steel Fitting (H/F 1058) |
| 4...#3 Straight Teflon Hose Fitting (H/F 1248) | 12...#3 Loop Clamp (H/F 1352) |
| 1...#3 Bulkhead Running Tee (H/F 1803) | 1...#3 Bulkhead Tee (H/F 1806) |
| 1...#3 Straight Bulkhead Fitting (H/F 1809) | 1...#3 90 Deg. Bulkhead Fitting (H/F 1812) |

NOTES: Installation of 4103 kit requires the use of a 37° single flare tool for the hard lines.

INSTALLATION:

- 1... Begin at the master cylinder. You may need to install two adapter fittings into the master cylinder to start the hardline installation. If the master cylinder is installed on the floor or below the height of the calipers you must install residual pressure valves (2 lbs. for disc and 10 lbs. for drum).
- 2... Next, determine a secure location to mount a line lock, if used. Make sure to leave enough room for residual pressure valves if needed (purchased separately). If residual pressure valve are to be used, place one in each line so that they are easily reached. If starting with drum brakes, conversion to the lighter pressure valve, for disc brakes, will be made easier in the future.
- 3... Route the hard line from the master cylinder to residual pressure valve for the front brakes. Slide the sleeves and nuts over the hard lines and flare the ends. Install fittings (#3-1/8") into each end of the residual pressure valve. Loosely install the hard line for the front brakes into the master cylinder and residual pressure valve.
- 4... Plumb the front brakes hard line from the residual pressure valve to the line lock in the same manner as described in the previous step. Tighten all fittings from the line lock to the master cylinder.
- 5... Locate a place on both, driver and passenger, sides of the chassis just behind the centerline of the front spindles to weld the chassis tabs. The tabs can be trimmed to fit the frame rails and should be mounted so that the holes face the tires. This position should be in a convenient location without causing any interference and as far away from heat as possible.
- 6... Install the 900 Bulkhead fitting loosely in the passenger side tab, using a 3/8" jam nut. Loosely install the Running Tee in the driver side chassis tab.
- 7... Bend the hard line from the 900 Bulkhead fitting on the passenger side to the Running Tee on the driver side. Be aware of the placement of the line, shortest path and heat should be considered.
- 8... Slip the nuts and the sleeves over the hard line and flare each end. Loosely install both ends on the fittings. Install an appropriate number of loop clamps to support and protect the hard line.
- 9... Plumb the hard line from the line lock to the Running Tee. Install sleeves and nuts on hard line and flare ends. Install hard line on both the line lock and Running Tee. Tighten both connections.

10...Install both, pre-made, flexible brake lines from the fittings on the chassis to the fittings (#3-1/8") on the calipers. Tighten all fittings and bulkhead jam nuts at the chassis tabs. Make sure that both flexible brake lines have free and clear movement.

11... Next, start on the rear brake system. Route the hard line from the master cylinder to residual pressure valve for the rear brakes. Slide the sleeves and nuts over the hard lines and flare the ends. Install fittings (#3-1/8") into each end of the residual pressure valve. Loosely install the hard line for the rear brakes into the master cylinder and residual pressure valve.

12...Locate a secure area above the center of the rear end housing. Position the tab so that the hole is in a direction that will give the most flexibility. Weld chassis tab into place and install straight bulkhead fitting loosely with jam nut.

13... Route the hard line from the residual pressure valve towards the back of the car to the straight bulkhead fitting. Using the loop clamps, secure the hard line as needed for adequate support. Route the line in areas that will offer protection.

14...Slip the nuts and sleeves on each end of the hard line. Flair each end and install loosely onto fittings at the pressure residual valve and the straight bulkhead fitting at the rear of the car.

15...Next, loosely install one end of the 20" flex line on the straight bulkhead fitting. Using the loose end of the hose, locate the best place for the remaining chassis tab to be welded to the rear end housing. Make sure the location is both convenient and safe before welding.

16...Loosely install the bulkhead standard tee with the jam nut. Install the #3 -1/8" fittings into the calipers.

17...Cut the #3 braided hose in two pieces that will be used to connect the calipers to the bulkhead tee. Install one #3 hose fitting in one end of each braided hose. Loosely connect the two hoses to the bulkhead tee.

18...Stretch the braided line out to the calipers and trim off any extra length. Leave just enough for maintenance and securing to the housing. Install the remaining hose ends on both hoses. Install the loose end of hoses on the calipers and tighten all fittings.

19... Fill the master cylinder with fluid, bleed brakes and check for leaks.

