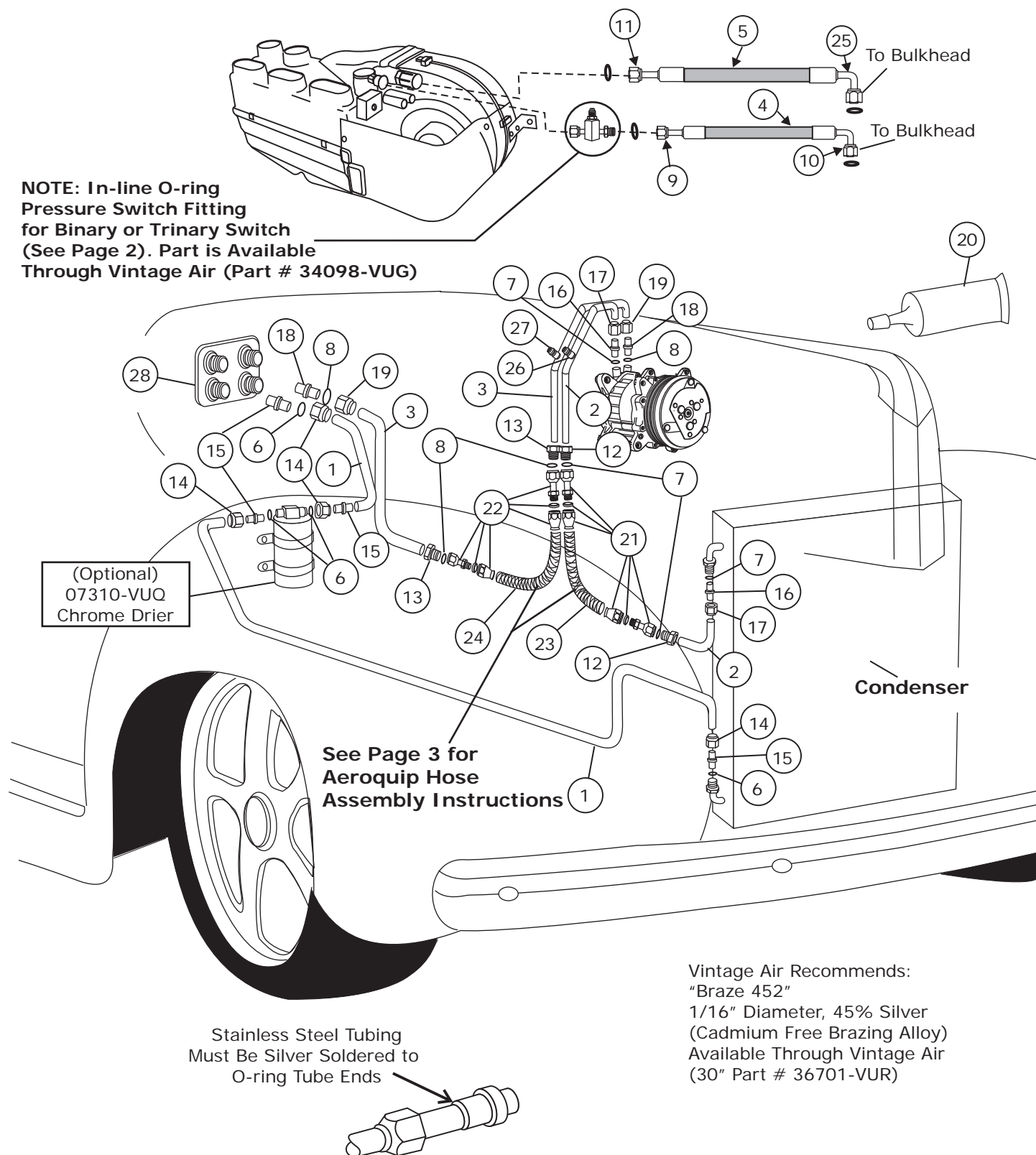




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# **Installation Instructions: Stainless Steel Line Kit with 4-Way Bulkhead (31203-VUQ)**

**NOTE: In-line O-ring  
Pressure Switch Fitting  
for Binary or Trinary Switch  
(See Page 2). Part is Available  
Through Vintage Air (Part # 34098-VUG)**





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## Bending Instructions

1. Before any tube bending is attempted, make "patterns" out of malleable copper tubing. **NOTE: Malleable copper tubing may be purchased from your local plumbing supply store.**
2. Install the stainless steel ends and nuts so that the patterns will be as accurate as possible.
3. During the bending process, double check yourself often to ensure a desirable fit.

## Soldering Instructions

**NOTE: Make sure the fitting nuts are on before the ends are soldered onto the tubing.**

1. Use silver soldering flux to flux the area to be soldered. Be sure to flux only the outside surface of the tubing, and avoid getting any flux inside the tubing.
2. Concentrate the heat on the thicker stainless steel end, rather than on the thinner tubing.
3. Heat the stainless steel end until the silver solder begins to flow around the joint. After the flow begins, remove heat to avoid overheating the material. Only add additional heat if it is needed to keep the solder flowing until the entire joint is filled.

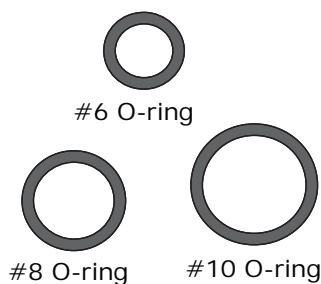
## Polishing Instructions

1. Before polishing, cap ends of tubing.
2. After all fitting, bending and soldering is complete, use some medium-grit emery cloth to sand the impurities and flux from the outside of the tubing. The small scratches left behind will polish out.
3. After tubing has been sanded smooth and clean, polish with a high speed buffer and some polishing rouge until highly polished. **NOTE: Be very careful when polishing materials with a stationary buffer. The buffing wheel can grab the material.**

## Hose Instructions

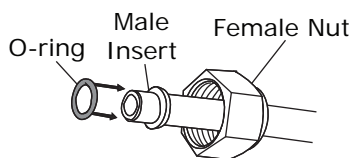
1. Stainless steel flex hoses should be used in the engine compartment.
2. Rubber hoses should be used inside the passenger compartment.

## Lubricating O-rings



**NOTE: Standard torque specifications:**

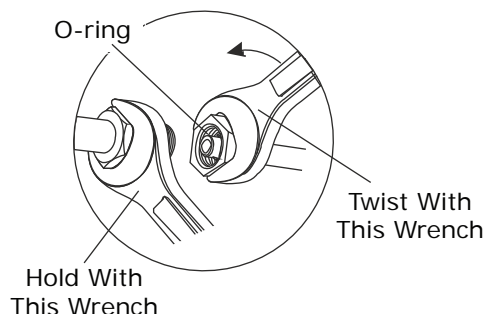
- #6: 11 to 13 ft.-lb.
- #8: 15 to 20 ft.-lb.
- #10: 21 to 27 ft.-lb.



Supplied Oil  
for O-rings

O-ring Installs  
Over Male Insert  
to Swaged Lip

**For a proper seal of fittings: Install supplied O-rings as shown, and lubricate with supplied oil.**



## Safety Switches

A compressor safety switch must be installed on every A/C system. A binary switch disengages the compressor clutch in cases of extreme low pressure conditions (refrigerant loss) or excessively high head pressure (406 PSI) to prevent compressor damage or hose rupture. A trinary switch combines Hi/Lo pressure protection with an electric fan operation signal at 254 PSI, and should be substituted for use with electric fans. Compressor safety switches are extremely important since an A/C system relies on refrigerant to carry lubrication through the system.



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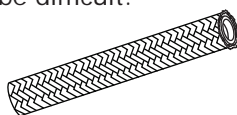


## Stainless Steel Braided Line Assembly Instructions



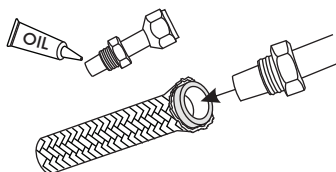
### Step 1

Wrap a piece of strapping tape around the hose twice, and mark to correct length for cutting. Using a cut-off saw with a knife blade or equivalent, cut the hose through the tape where marked. This must be a clean, straight cut. Otherwise, hose assembly will be difficult.



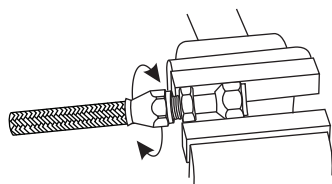
### Step 4

With the socket slid on the hose, remove the tape. Be sure to remove all of the tape. Use a knife if necessary.



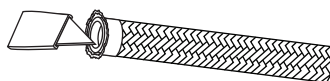
### Step 7

Lubricate the nipple with supplied refrigerant oil. Insert the lubricated nipple into the hose.



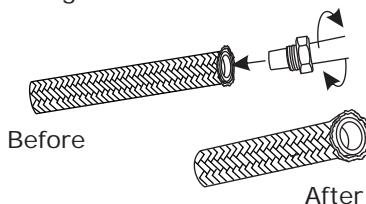
### Step 10

Place the fitting in a soft jaw vise. Then hand tighten the socket to the nipple.



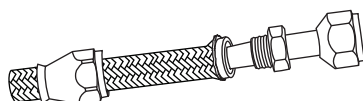
### Step 2

Using a knife, remove any burrs or debris from the end of the hose. Clean the hose out thoroughly before assembling fittings.



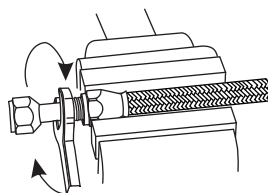
### Step 5

Insert the fitting nipple gently into the end of the hose. Using a slow rotating motion, roll the fitting nipple around the inside hose, so the braid separates from the tube, as shown. Be careful not to stretch the tube out too much, or it will not fit into the sleeve.



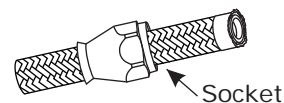
### Step 8

Use a rotating motion until the nipple has bottomed out into the sleeve. Be very careful not to crush the hose.



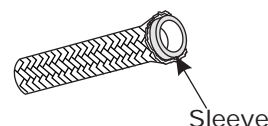
### Step 11

Using a wrench, tighten the nipple the rest of the way onto the socket. It is OK if the hose rotates during this process. Be careful not to overtighten the threads, as this could cause stripping.



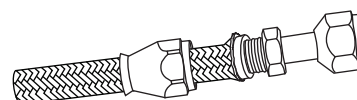
### Step 3

Once the hose is cut and cleaned, insert the hose through the socket (The threads should be facing in the direction that the nipple will be inserted).



### Step 6

Push the sleeve over the end of the blue tube, and under the wire braid by hand. Complete positioning of the sleeve by pushing the hose end against a flat surface. Visually inspect to see that the tube stock butts against the O-ring on the inside of the sleeve. Be careful not to kink or damage the hose during this process. If the hose is damaged, a new piece must be cut and used.



### Step 9

With the nipple fully inserted, slide the socket back up the hose to the nipple threads.



### Step 12

Repeat steps to complete the other end of the hose assembly. Once assembled, remove any contaminants from the hose before installing it into the A/C system.

**NOTE:** Aeroquip braided hose must not be bent tighter than listed minimum bend radius. Overbending hose will result in cracked inner liner and hose failure.

Minimum bend radius: #6: 4.00 Inches #8: 5.25 Inches #10 6.5 Inches



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# **Packing List: Stainless Steel Line Kit with 4-Way Bulkhead (31203-VUQ)**

No.	Qty.	Part No.	Description
1.	6'	06300-VUG	Tubing, Stainless Steel, 5/16"
2.	3'	06301-VUG	Tubing, Stainless Steel, 3/8"
3.	6'	06302-VUG	Tubing, Stainless Steel, 1/2"
4.	2'	31854-VUD	A/C Hose, #6
5.	2'	31856-VUD	A/C Hose, #10
6.	4	33857-VUF	O-ring, #6
7.	4	33858-VUF	O-ring, #8
8.	4	33859-VUF	O-ring, #10
9.	1	35811-VUG	Fitting, 3/8", #6 Hose, Straight Female, O-ring
10.	1	35831-VUG	Fitting, 3/8", #6 Hose, 90 Degree Female, O-ring
11.	1	35813-VUG	Fitting, 5/8", #10 Hose, Straight Female, O-ring
12.	2	36255-MPA	Nut, #8 Stainless Steel Male, Weld On, O-ring
13.	2	36356-MPA	Nut, #10 Stainless Steel Male, Weld On, O-ring
14.	4	36140-MPA	Tite Fit Nut, #6
15.	4	36400-MPA	Line End, #6 Stainless Steel, Weld On, O-ring
16.	2	36500-MPA	Line End, #8 Stainless Steel, Weld On, O-ring
17.	2	36240-MPA	Tite Fit Nut, #8
18.	2	36600-MPA	Line End, #10 Stainless Steel, Weld On, O-ring
19.	2	36340-MPA	Tite Fit Nut, #10
20.	1	41117-VUP	Refrigerant Oil Tube
21.	2	36540-VUR	Fitting, #8 Aeroquip, Straight
22.	2	36640-VUR	Fitting, #10 Aeroquip, Straight
23.	1	36908-VUR	A/C Hose, #8 Braided Stainless Steel
24.	1	36910-VUR	A/C Hose, #10 Braided Stainless Steel
25.	1	35833-VUG	Fitting, #10 Hose, 90 Degree Female, O-ring
26.	1	34906-VUG	134a Fitting, #8 Steel, 16 mm, Weld On
27.	1	34907-VUG	134a Fitting, #10 Steel, 13 mm, Weld On
28.	1	384600-MBA	Bulkhead, Streamline 4-Way Square #6-#10

Checked By: \_\_\_\_\_

Packed By: \_\_\_\_\_

Date: \_\_\_\_\_