



## **Slimline**

**Heat/Cool**

**(113010)**

**(114010)**



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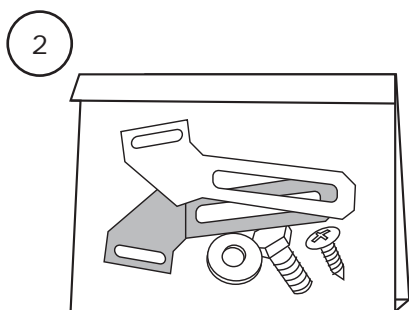


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## Packing List: Evaporator Kit (113010)(114010)

No.	Qty.	Part No.	Description
1.	1	553280	Evaporator Subcase H/C with Standard Louvers
		554280	Evaporator Subcase H/C with Black Louvers
2.	1	64143-VUE	Bracket Kit, Evaporator Front
3.	1	633000	Installation Kit

**\*\* Before beginning installation, open all packages and check contents of shipment.  
Please report any shortages directly to Vintage Air within 15 days. After 15 days,  
Vintage Air will not be responsible for missing or damaged items.**



**NOTE: Images may not depict actual parts and quantities.  
Refer to packing list for actual parts and quantities.**



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## Important Notice—Please Read

*For Maximum System Performance, Vintage Air Recommends the Following:*

**NOTE:** Vintage Air systems are designed to operate with R134a refrigerant only. Use of any other refrigerant could damage your A/C system and/or vehicle, and possibly cause a fire, in addition to potentially voiding the warranties of the A/C system and its components.

### Refrigerant Capacities:

**Vintage Air System:** 1.8 lbs. (28.8 oz.) or 816 grams of **R134a**, charged by weight with a quality charging station or scale. **NOTE:** Use of the proper type and amount of refrigerant is critical to system operation and performance.

**Other Systems:** Consult manufacturer's guidelines.

### Lubricant Capacities:

**New Vintage Air-Supplied Sanden Compressor:** No additional oil needed (Compressor is shipped with proper oil charge).

**All Other Compressors:** Consult manufacturer (Some compressors are shipped dry and will need oil added).

### Safety Switches

Your Vintage Air system is equipped with a binary pressure safety switch. 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 circulate lubricant.

### Service Info:

**Protect Your Investment:** Prior to assembly, it is critical that the compressor, evaporator, A/C hoses and fittings, hardlines, condenser and receiver/drier remain capped. Removing caps prior to assembly will allow moisture, insects and debris into the components, possibly leading to reduced performance and/or premature failure of your A/C system. This is especially important with the receiver/drier.

Additionally, when caps are removed for assembly, **BE CAREFUL!** Some components are shipped under pressure with dry nitrogen.

**Evacuate the System for 35-45 Minutes:** Ensure that system components (Drier, compressor, evaporator and condenser) are at a temperature of at least 85°F. On a cool day, the components can be heated with a heat gun **or** by running the engine with the heater on before evacuating. Leak check and charge to specifications.

### Bolts Passing Through Cowl and/or Firewall:

To ensure a watertight seal between the passenger compartment and the vehicle exterior, for all bolts passing through the cowl and/or firewall, Vintage Air recommends coating the threads with silicone prior to installation.

### Heater Hose (not included with this kit):

Heater hose may be purchased from Vintage Air (Part#31800-VUD) or your local parts retailer. Routing and required length will vary based on installer preference.



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## Planning Overview

Every vehicle is a little different, depending on the:

1. Type of vehicle/engine and location of engine.
2. Type of air conditioning equipment used.
3. Owner's preferences.

There are many factors that go into making each air conditioning installation different. Usually, all of the above decisions are made before any consideration is given to the air conditioning installation. The A/C system is then tailored to fit your particular application.

The mounting location of the evaporator unit is determined in part by the space available for the hose routing. The components used in the hose routing process (i.e. bulkhead plates, fitting and grommets, etc.) will also influence the location of the evaporator unit. When planning your hose routing, you must install the major component parts. Mount the compressor, condenser and drier. The evaporator must be temporarily held in position under the dash. Final mounting of the evaporator to the firewall should not be done until you have verified that all hoses attaching to the evaporator will exit the firewall and/or kick panel as planned. The hoses must be run exactly the way they will be when finished, before cutting them to length.

The Vintage Air Slimline unit was designed for street rods, custom cars and trucks. The evaporator unit is designed to mount behind the dash.

Read the installation instructions completely, and familiarize yourself with all the parts and illustrations.

The installation of this unit varies, according to the body manufacturer or modifications to the original body. The cowl vent may remain operational. Take your time, and double check before drilling or cutting.

Before beginning, remove the cowl vent handle and glove box to ease installation. If the dash is easily removable, remove it now. Check for, and fill in any holes in the firewall and floor. Insulate and seal the firewall, floor, door panels and headliner to reduce the amount of heat entering the vehicle.

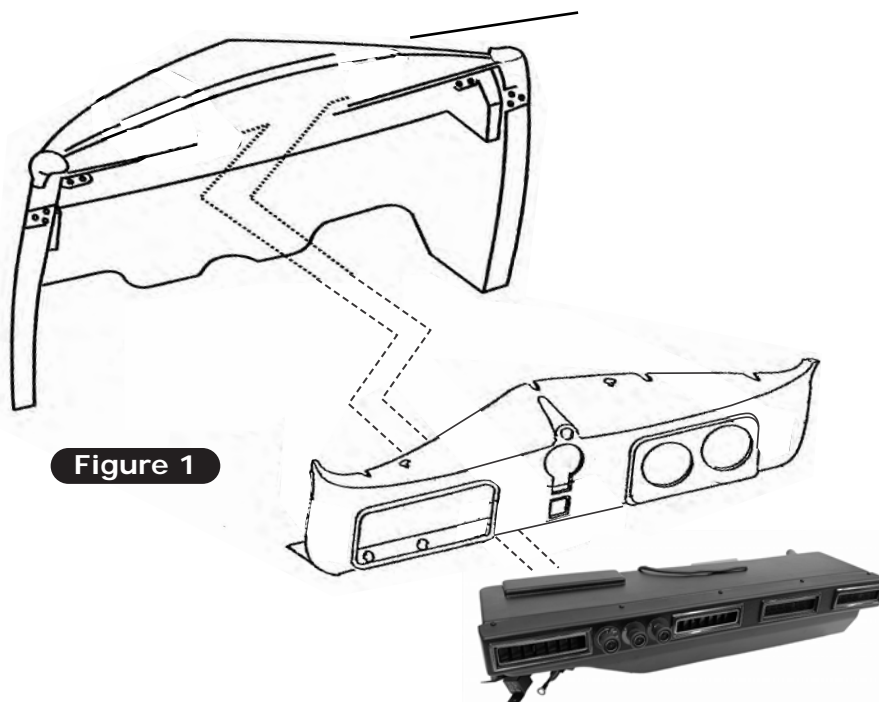


Figure 1



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## Evaporator Installation

1. Secure the evaporator brackets to the evaporator unit (See Figure 1, below). **NOTE: Evaporator brackets can be installed facing in or out, depending on space and installer's preference.**
2. Position the evaporator assembly under the dash. Mark and drill (2) 9/32" diameter holes under the lip of the dash.
3. Secure the front brackets to the dash using 1/4" x 1" bolts, washers and nuts provided (See Figure 1, below).
4. Secure the rear brackets to the cowl or firewall using (2) #8 x 1/2" sheet metal screws.
5. Attach the drain hose (See Figure 2, below) and drill a 9/16" diameter hole in the firewall, 1" below the bottom of the evaporator assembly.

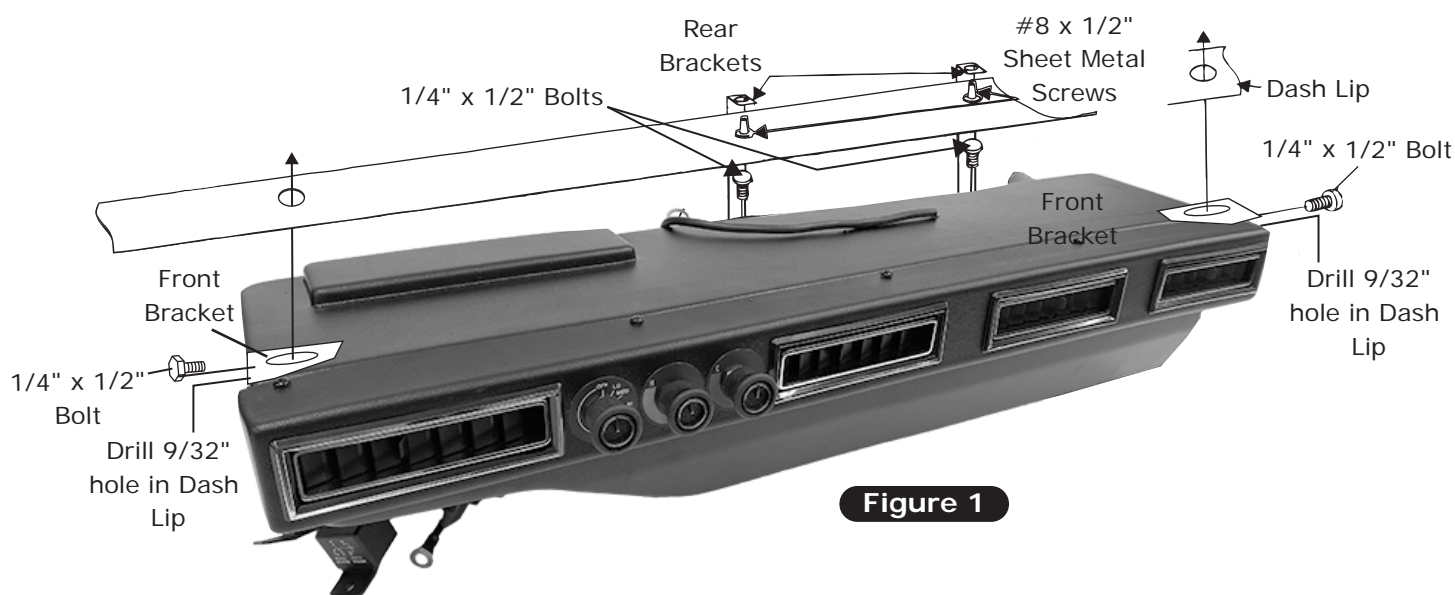


Figure 1

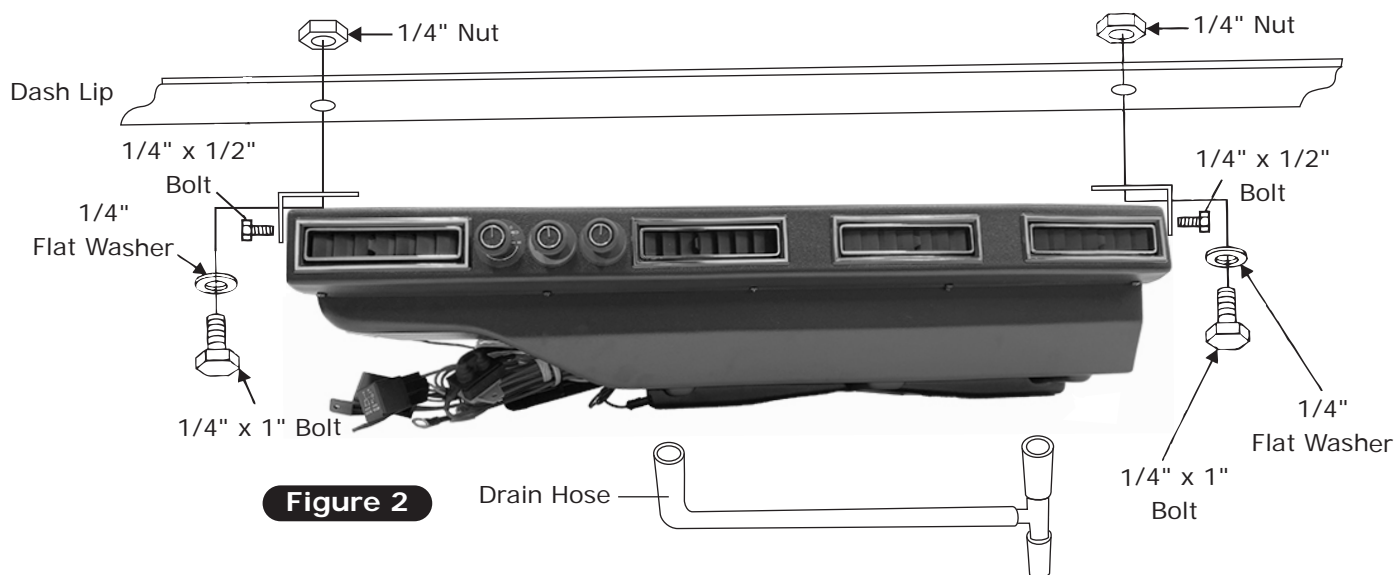


Figure 2



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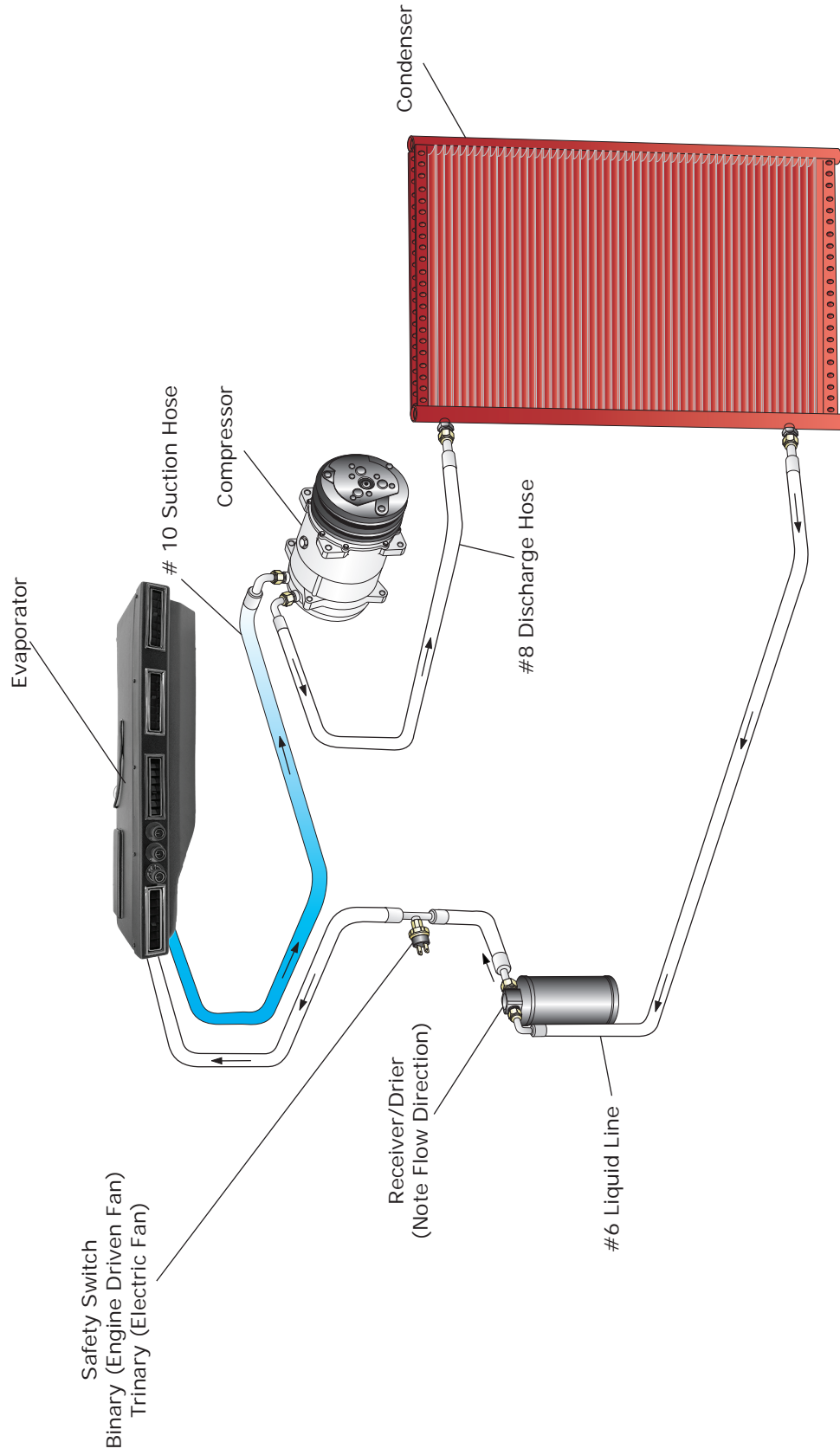
## Evaporator Installation (Cont.)

6. Push the 5/16" I.D. hose onto the straight #6 fitting (See Hose Routing Installation, Page 8). Install the fitting onto the expansion valve (finger tight). Push the 1/2" I.D. hose onto the straight #10 fitting, and install the fitting onto the #10 line on the evaporator unit (See Hose Routing Installation, Page 8).
7. At this time, try to determine where you want your lines to go through the firewall. Move the hoses to that point. Hold the fittings up to their respective hoses, and determine if the hoses will conform to the location for the bulkhead fittings or optional bulkhead plate. The 1/2" hose is hard to bend at a sharp angle, and the fittings take up a certain amount of space. **NOTE: Before you drill holes in your firewall, make sure that you can make the hoses fit where you have planned.** The engine compartment appearance is a consideration when choosing this location.
8. When you have decided where you want to place your bulkhead fittings, mark these points with a grease pencil, and make a template from the inside location where the holes will be cut. Using the template, locate the same points on the outside of the firewall. Mark these points with a grease pencil.
9. Determine the best location for the drier that will allow adequate room for the hose and fittings that connect the drier to the bulkhead fitting.
10. Mount the drier. **NOTE: Keep the drier capped as much as possible. If you must screw the fitting to the drier, tape it closed. The drier is usually mounted where you have room for it. Just remember to mount it in the coolest spot possible and vertically so the sight glass is directly on top. Do not mount next to the exhaust manifold. It can also be mounted inside of the vehicle.**
11. At this point, cut holes for the bulkhead fittings, and install them. Using the hose routing illustration as a guide, route the remaining A/C lines, and cut them to length.
12. At this time, you should have the refrigeration hoses cut to their proper length. **Pay close attention to the orientation of any hose with two angled fittings.** Any hose with two angle fittings must be marked from the hose to the fittings to assure they will remain in the position after crimping. The rubber hose is only capable of a minimal amount of twist to aid alignment.
13. Remove hoses and crimp ends. If you do not have access to the proper equipment, Vintage Air recommends taking them to a qualified A/C service center for crimping (See crimping instructions supplied with the hose kit).
14. With the evaporator trial fit complete, remove the unit and lower into the vehicle.
15. After crimping the hoses, locate the #6 A/C hose with the straight fitting. Lubricate a #6 O-ring and the threads on the fitting, then install it onto the expansion valve. Tighten carefully. Refer to Figures 1 and 1a, Page 9.
16. Locate the #10 A/C hose with the straight fitting. Lubricate a #10 O-ring and the threads on the fitting, then install it onto the #10 line of the evaporator. Tighten carefully. Refer to Figures 1 and 1a, Page 9.
17. Wrap the #10 fitting with press tape, and cover all exposed metal surfaces. **NOTE: Do not wrap the #6 A/C hose, fitting or the heater core tubes. See Figure 1, Page 9.**



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# Typical Hose Routing Diagram



Direction of refrigerant flow indicated by arrows.



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## O-ring/Fitting Instructions

1. Route the heater hoses (Refer to Heater Hose Routing instructions, Page 10).
2. Make electrical connections, according to the diagram furnished on Page 11. **NOTE: The red 12GA wire with the 30 Amp circuit breaker should be connected to a 12 volt power source of at least 12GA wire. Connect the molded plug with the red, yellow and orange wires to the corresponding plug from the blower motor. The single black wire from the blower motor must be grounded. The blue clutch wire runs from the thermostat to the compressor safety switch, then from the safety switch to the compressor. Be careful to ensure that this wire is not pinched or in a position to rub on a sharp edge as it goes through the firewall.**

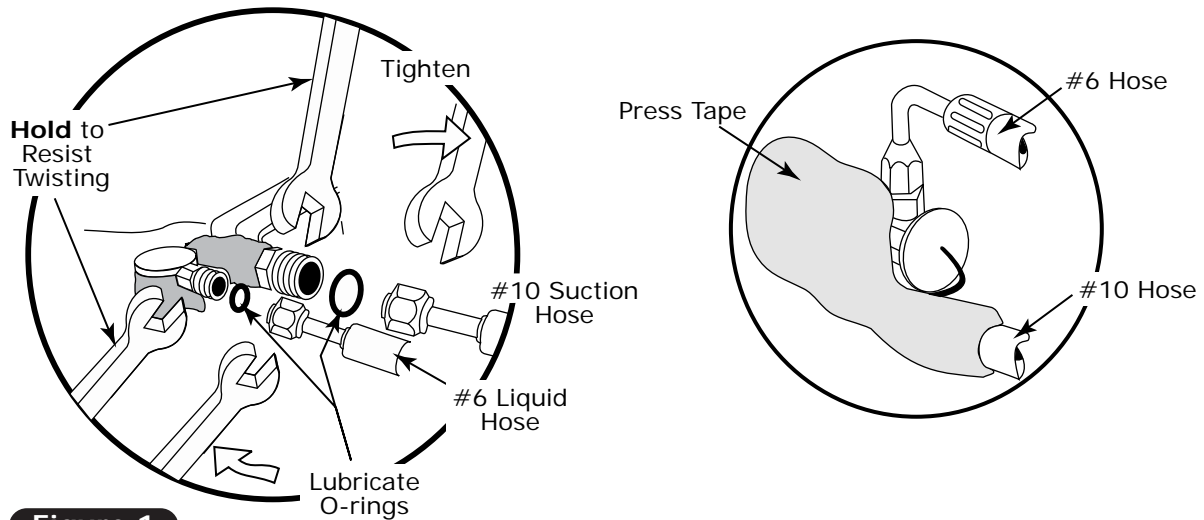
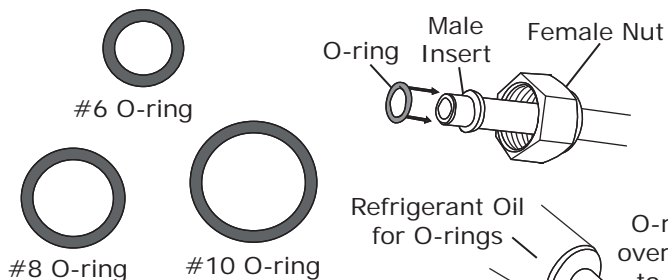


Figure 1

## 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.

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

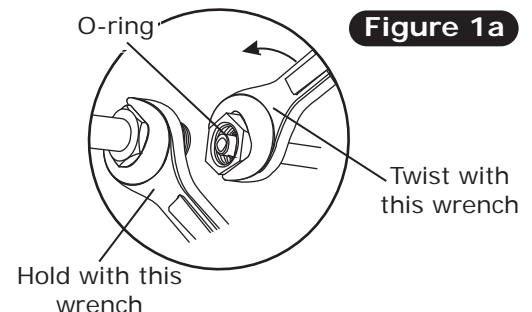


Figure 1a



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## Heater Hose Installation

1. After the evaporator assembly is in place, run some 5/8" heater hose from the bottom heater fitting on the evaporator through the firewall or behind the kick panel through the floor to the intake manifold heater connection. Install the heater control valve in this line (Pressure) (See Figure 1, below). **NOTE: Be sure to follow the flow arrow on the heater control valve.**
2. Install some 5/8" heater hose onto the top fitting of the heater. Route the hose through the firewall or behind the kick panel through the floorboard and out to the water pump connection (Suction).
3. **Fill the radiator with at least a 50/50 mixture of approved antifreeze and distilled water. It is the owner's responsibility to keep the freeze protection at the proper level for the climate in which the vehicle is operating. Failure to follow antifreeze recommendations will cause the heater core to corrode prematurely and possibly burst in the A/C mode and/or freezing weather, voiding your warranty. Check complete A/C assembly for proper operation. Vintage Air recommends that all A/C systems be serviced by a certified automotive air conditioning technician only. See inside cover for service information.**
4. Start engine and run until normal operating temperature is reached. Place switch in heat position and select fan speed desired. The system will heat the vehicle. **NOTE: Be sure the engine thermostat has opened and the approved antifreeze mixture has been circulated through the heater core before testing the A/C modes.**
5. When valve is closed, inlet side of the valve should be hot and the outlet side should be cool. When the valve is open, both inlet and outlet sides should be hot.

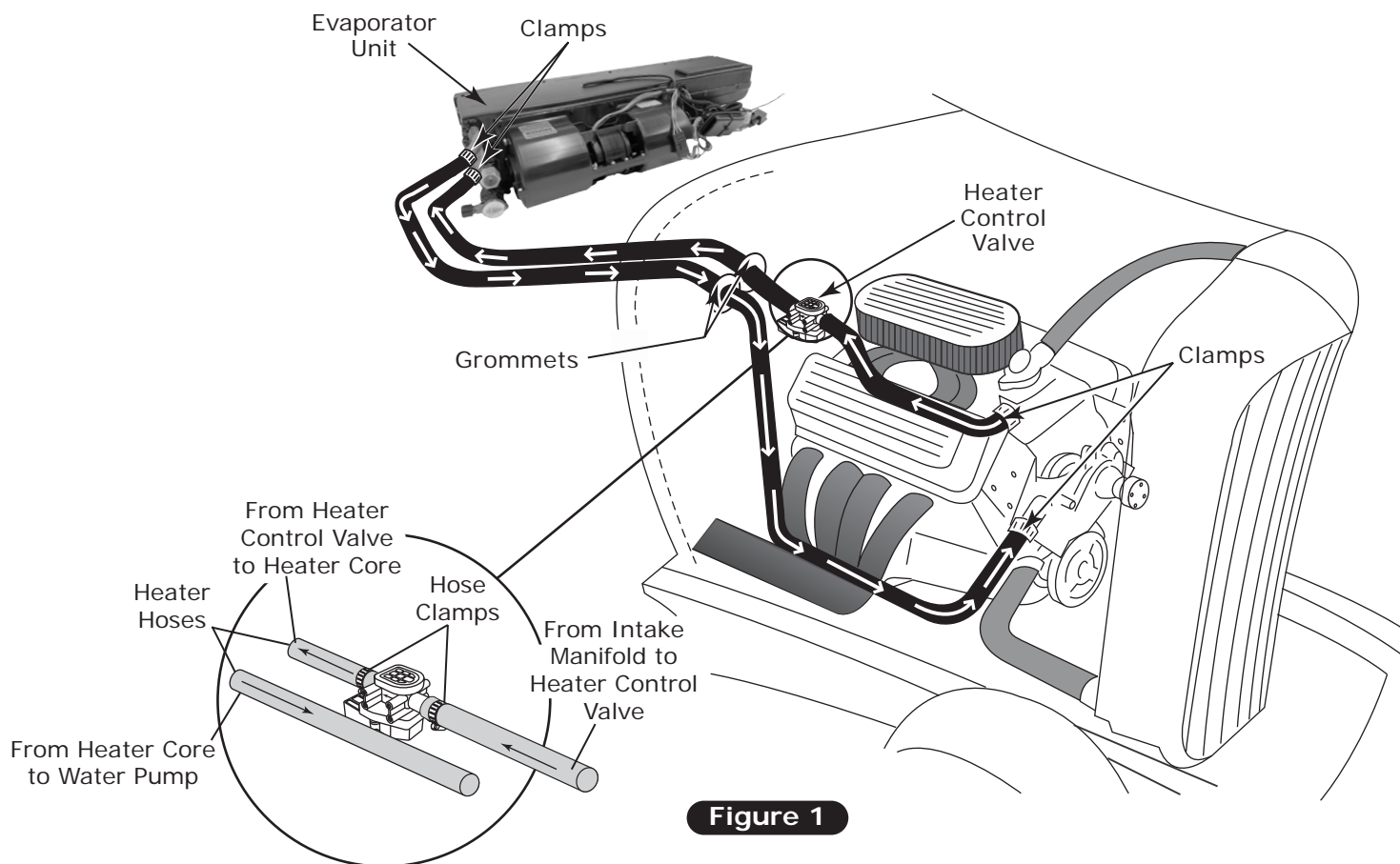


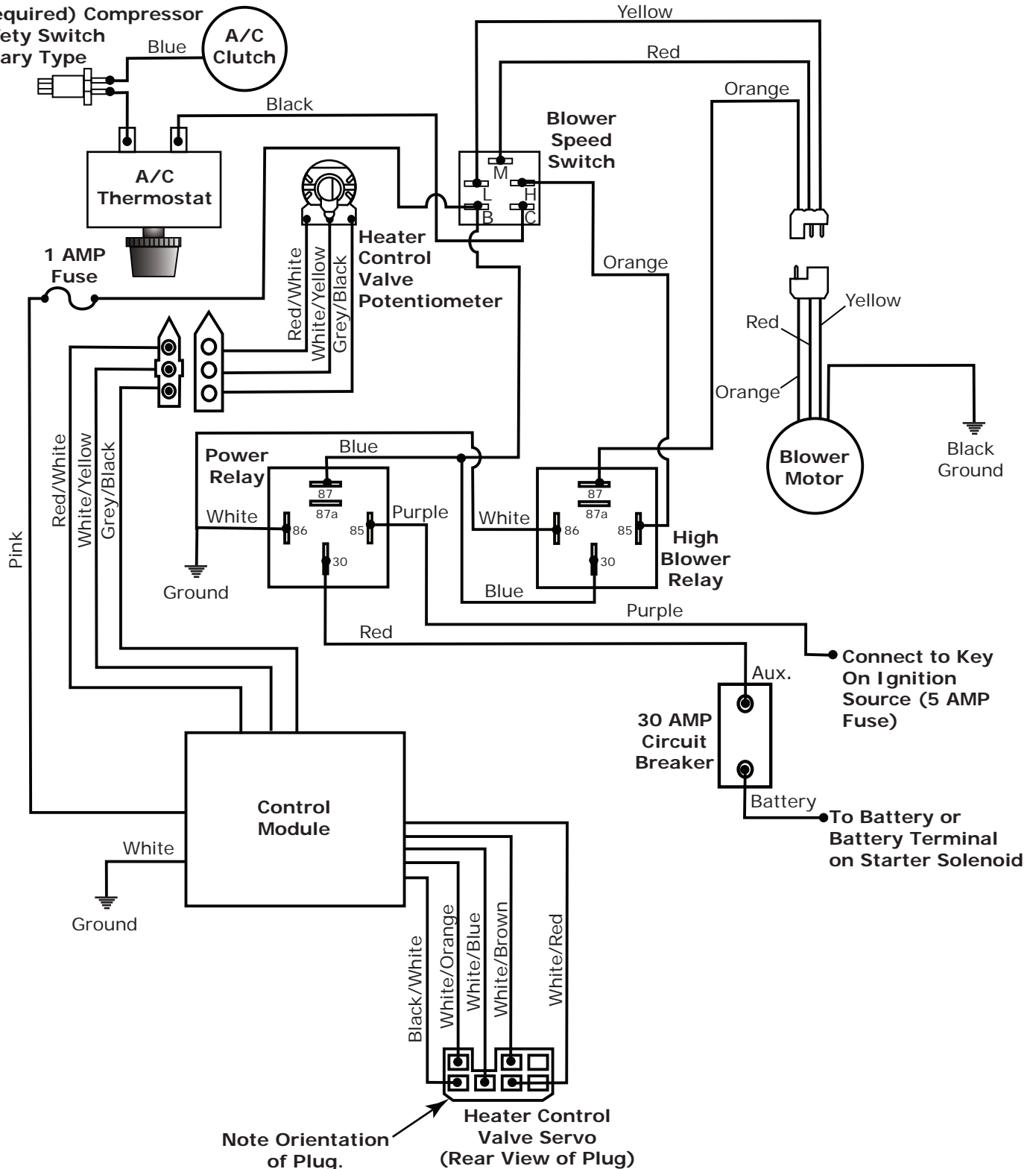
Figure 1

**NOTE: Flow Direction Follows Molded Arrow on Valve.**



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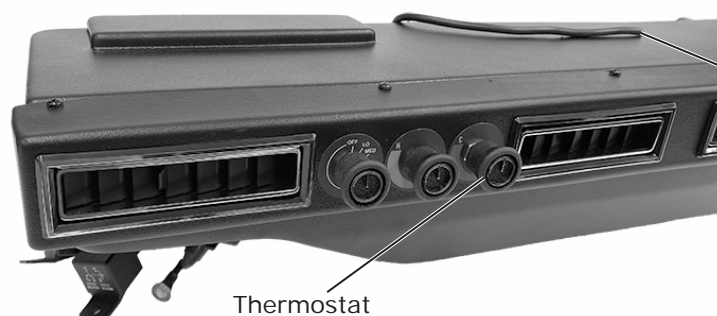
## Wiring Diagram





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## Thermostat Adjustment

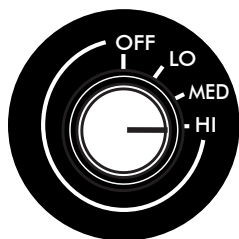


Capillary Tube to  
Evaporator Coil

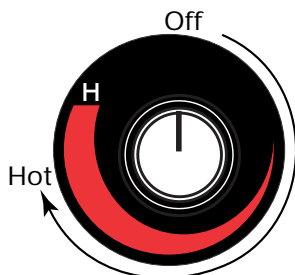
Thermostat

## Operation of Controls

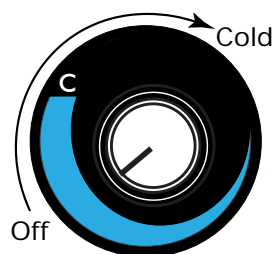
1. Heat knob adjusts flow of hot water through the heater. Counterclockwise is off. Clockwise is for increasing heat.
2. A/C thermostat knob controls the evaporator coil temperature. Counterclockwise is off. Full clockwise is maximum cold (28°).
3. For A/C operation, rotate the thermostat clockwise to its stop, then back off slightly (1/8 turn) to prevent coil freeze-up. To warm up vent temperature during A/C operation, slightly increase the heat knob setting.
4. For heat operation, rotate thermostat clockwise to its stop (off), then adjust heat knob for desired temperature.



Blower Speed



Heat



A/C Thermostat

## Adjusting A/C Thermostat

1. **Symptom:** The A/C works well at first then quits cooling. The airflow from the vents is low, and the compressor clutch cycles infrequently.  
**Solution:** The thermostat is set too cold and the evaporator is "icing up" and restricting airflow. **Allow the ice to melt** and set the thermostat warmer (counterclockwise) 1/8 of a turn each adjustment until the symptoms diminish.
2. **Symptom:** The A/C never gets cold and the compressor clutch cycles frequently.  
**Solution:** The thermostat is too warm. Set the thermostat colder (clockwise) 1/8 of a turn each adjustment until the desired air temperature is reached. **Avoid setting the thermostat too cold.**
3. **Symptom:** The A/C never gets cold, sometimes even blowing hot, and the A/C compressor clutch infrequently cycles off.  
**Solution:** The heater may be on at all times. **Carefully** feel the heater hose between the **evaporator** and the **heater control valve**. This hose should not be hot in the **A/C mode**. If the hoses are hot:  
A) The heater control valve may be installed backwards. Check the flow direction arrow on the valve against the illustration in your installation instructions.  
B) The heater control valve may be installed in the wrong hose. It must be installed in the hose coming from the intake manifold engine coolant **pressure port**.





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## Packing List: Evaporator Kit (113010)(114010)

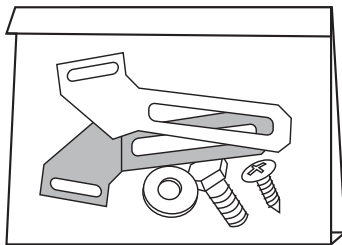
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2.	1	64143-VUE	Bracket Kit, Evaporator Front	_____
3.	1	633000	Installation Kit	_____

Checked By: \_\_\_\_\_  
Packed By: \_\_\_\_\_  
Date: \_\_\_\_\_

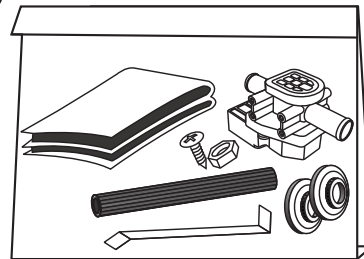
1



2



3



**NOTE: Images may not depict actual parts and quantities.  
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