1968-72 Ford F-100
Evaporator Kit
(751153)
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**Packing List:**

E**vaporator Kit (751153)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Qty.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1</td>
<td>744019</td>
<td>Gen IV Evaporator Sub Case</td>
</tr>
<tr>
<td>2.</td>
<td>1</td>
<td>791153</td>
<td>Accessory Kit</td>
</tr>
</tbody>
</table>

**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.**

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**Accessory Kit 791153**

**NOTE:** Images may not depict actual parts and quantities. Refer to packing list for actual parts and quantities.
**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. (1 lb., 12 oz.) 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 remained 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.
Important Wiring Notice—Please Read

Some Vehicles May Have Had Some or All of Their Radio Interference Capacitors Removed. There Should Be a Capacitor Found At Each of the Following Locations:

1. On the positive terminal of the ignition coil.
2. If there is a generator, on the armature terminal of the generator.
3. If there is a generator, on the battery terminal of the voltage regulator.

Most alternators have a capacitor installed internally to eliminate what is called “whining” as the engine is revved. If whining is heard in the radio, or just to be extra cautious, a radio interference capacitor can be added to the battery terminal of the alternator.

It is also important that the battery lead is in good shape and that the ground leads are not compromised. There should be a heavy ground from the battery to the engine block, and additional grounds to the body and chassis.

If these precautions are not observed, it is possible for voltage spikes to be present on the battery leads. These spikes come from ignition systems, charging systems, and from switching some of the vehicle’s other systems on and off. Modern computer-operated equipment can be sensitive to voltage spikes on the power leads, which can cause unexpected resets, strange behavior, and/or permanent damage.

Vintage Air strives to harden our products against these types of electrical noise, but there is a point where a vehicle’s electrical system can be degraded so much that nothing can help.

Radio interference capacitors should be available at most auto and truck parts suppliers. They typically are cylindrical in shape, a little over an inch long, a little over a half inch in diameter, and they have a single lead coming from one end of the cylinder with a terminal on the end of the wire, as well as a mounting clip which is screwed into a good ground on the vehicle. The specific value of the capacitance is not too significant in comparison to ignition capacitors that are matched with the coil to reduce pitting of the points.

- Care must be taken, when installing the compressor lead, not to short it to ground. The compressor lead must not be connected to a condenser fan or to any other auxiliary device. Shorting to ground or connecting to a condenser fan or any other auxiliary device may damage wiring, the compressor relay, and/or cause a malfunction.
- When installing ground leads on Gen IV systems, the blower control ground and ECU ground must be connected directly to the negative battery post.
- For proper system operation, the heater control valve must be connected to the ECU.
Evacuate the A/C system.

Disconnect the battery.

Place a jack stand under the axle bar on the passenger side of the vehicle (See Photo 1, below), and remove the passenger side front tire.

Drain the radiator.

Loosen the cable clamp and disconnect the cable from the OEM heater control valve (See Photo 2, below).

Disconnect and remove the (2) heater assembly heater hoses at the firewall (See Photo 3, below), the intake and the water pump (discard).

Remove the OEM fan shroud by removing (4) bolts ((2) on each side) (See Photo 4, below).

Remove the OEM radiator cooling fan by removing (4) bolts from the fan (See Photo 5, below).

Disconnect the A/C hoses from the A/C compressor (See Photo 6, below).

Some F Series trucks are equipped with a 3-speed manual transmission with a “granny” 1st gear. These configurations use a long shift lever; the most popular in this generation is the 4-speed New Process 435 transmission (Identified as “A” on VIN plate). The shift lever moves approximately 2” further forward to engage 1st gear compared to 3rd gear. This additional travel may cause an interference with the underdash louver bezel, and will require a modification to the shift lever in order to clear it.

Engine Compartment Disassembly
(Vehicles with Factory Air)

NOTE: Before starting the installation, check the function of the vehicle (horn, lights, etc.) for proper operation, and study the instructions, illustrations, & diagrams. Retain OEM bolts, washers and nuts, as some hardware will be reused.

Perform the Following:
1. Evacuate the A/C system.
2. Disconnect the battery.
3. Place a jack stand under the axle bar on the passenger side of the vehicle (See Photo 1, below), and remove the passenger side front tire.
4. Drain the radiator.
5. Loosen the cable clamp and disconnect the cable from the OEM heater control valve (See Photo 2, below).
6. Disconnect and remove the (2) heater assembly heater hoses at the firewall (See Photo 3, below), the intake and the water pump (discard).
7. Remove the OEM fan shroud by removing (4) bolts ((2) on each side) (See Photo 4, below).
8. Remove the OEM radiator cooling fan by removing (4) bolts from the fan (See Photo 5, below).
9. Disconnect the A/C hoses from the A/C compressor (See Photo 6, below).
10. Loosen the A/C compressor drive belt tensioner pulley (See Photo 7, below), and remove the belt.
11. Remove the A/C belt tensioner by removing (2) bolts (See Photo 8, below).
12. Remove the A/C compressor support brackets by removing (4) bolts ((2) on each bracket) (See Photos 9 & 10, below).
13. Remove the OEM compressor by removing (4) bolts at the bottom of the compressor (See Photo 11, below).
14. If equipped, separate the power steering pump from the power steering pump bracket by removing (4) nuts ((3) on the top side of the bracket (See Photo 12, below), and one on the adjustment bolt (See Photo 13, below)).
15. Remove the power steering cooler by removing the nut on the power steering pump bracket (See Photo 14, below).
16. Remove the power steering belt.
17. Remove the compressor idler pulley by removing the nut and the bolt (See Photo 15, below).
18. Remove the power steering pump bracket by removing the bolt that secures it to the head (See Photo 16, below).
19. Remove the OEM compressor bracket by removing the bolt shown in Photo 17, below.
20. From the engine compartment, remove the (2) OEM evaporator assembly mounting bolts from the firewall (See Photo 18, below).
Engine Compartment Disassembly
(Vehicles without Factory Air)

NOTE: Before starting the installation, check the function of the vehicle (horn, lights, etc.) for proper operation, and study the instructions, illustrations, & diagrams. Retain OEM bolts, washers and nuts, as some hardware will be reused.

Perform the Following:
1. Disconnect the battery.
2. Place a jack stand under the axle bar on the passenger side of the vehicle (See Photo 1, below), and remove the passenger side front tire.
3. Drain the radiator.
4. Loosen the cable clamp and disconnect the cable from OEM heater control valve (See Photo 2, below).
5. Disconnect and remove the (2) heater core heater hoses at the firewall, the intake, and the water pump (discard) (See Photos 3, 4, & 5, below).
6. From the engine compartment, remove the (3) OEM heater core mounting nuts from the firewall (See Photo 6, below).

Perform the Following:

1. Disconnect the battery.
2. Place a jack stand under the axle bar on the passenger side of the vehicle (See Photo 1, below), and remove the passenger side front tire.
3. Drain the radiator.
4. Loosen the cable clamp and disconnect the cable from OEM heater control valve (See Photo 2, below).
5. Disconnect and remove the (2) heater core heater hoses at the firewall, the intake, and the water pump (discard) (See Photos 3, 4, & 5, below).
6. From the engine compartment, remove the (3) OEM heater core mounting nuts from the firewall (See Photo 6, below).

Photo 1
Place Jack Stand Under Axle Bar

Photo 2
Disconnect Cable
Heater Control Valve
Loosen Cable Clamp

Photo 3
Remove (2) Heater Hoses at Firewall

Photo 4
Remove Heater Hose at Intake

Photo 5
Remove Heater Hose at Water Pump

Photo 6
Remove (3) Heater Core Mounting Nuts
Firewall
Engine Compartment View
Passenger Compartment Disassembly
(Vehicles with Factory Air)

Perform the Following:

1. Remove the glove box door by removing the (2) screws on the door hinge and one screw on the cable (See Photo 1, below).
2. Remove the glove box by removing the (6) screws around the glove box and (2) glove box door latch screws (See Photo 2, below). **NOTE:** The door latch screws must be removed to allow clearance when installing the new glove box.
3. Disconnect the plugs and cables from the installed evaporator unit (See Photo 3, below).
4. Disconnect and remove the drain tube at the bottom of the unit (See Photo 4, below). **NOTE:** If equipped, in the engine compartment, remove the drain tube bolt (See Photo 5, below).
5. Remove the (2) evaporator unit mounting bolts (one on each side of the evaporator unit) (See Photo 6, below).

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**Photo 1**
Remove (2) Door Hinge Screws
Remove Cable Screw

**Photo 2**
Remove (6) Screws
Remove (2) Glove Box Door Latch Screws

**Photo 3**
Disconnect Plugs and Cables from Evaporator Unit

**Photo 4**
Disconnect and Remove Drain Tube
Evaporator Unit

**Photo 5**
Remove Drain Tube Bolt (If Equipped)

**Photo 6**
Remove (2) Evaporator Unit Mounting Bolts
Passenger Compartment View
Passenger Compartment Disassembly
(Vehicles with Factory Air)(Cont.)

6. Drop the evaporator unit down, and disconnect the vent cable on the left side of the unit (See Photo 7, below).
7. Remove the defrost ducts and hoses by pulling them from the dash defrost outlets.
8. Disconnect the A/C hoses from the evaporator unit (See Photo 8, below),
9. Remove the evaporator unit from the vehicle.
10. Remove the fresh air kick panel by removing the (4) screws (discard) (See Photo 9, below).
11. Remove the A/C hoses from the vehicle (discard).
12. Disconnect the control panel wiring and plugs (See Photo 10, below).
13. Remove the (2) nuts securing the control panel onto the inner dash (one on each side of the control panel) (See Photos 11 & 12, below).

14. Disconnect the control panel light, and carefully remove the control panel from the dash.

15. To remove the radio, perform the following:
   A. Remove the knobs from the radio (See Photo 13, below).
   B. Remove the (2) mounting nuts and (2) bezel screws (See Photo 14, below).
   C. Remove the bezel.
   D. Remove the (2) radio dash mounting nuts and washers (See Photo 15, below).
   E. Remove the (2) radio bracket nuts on the back of the radio (See Photos 16 & 17, below).
   F. Disconnect the antenna and wiring, and remove the radio from the dash.

16. Disconnect the speedometer cable by loosening the speedometer cable nut and sliding it out of the instrument cluster (See Photo 18, below).

17. Remove the (8) instrument cluster bezel mounting screws (retain) (See Photos 19 & 20, below).
Passenger Compartment Disassembly
(Vehicles with Factory Air)(Final)

18. Unplug the instrument cluster wiring, and remove the instrument cluster (retain) (See Photo 21, below).
19. Remove the dash pad by removing the (14) dash pad nuts (retain) (See Photo 22, below). **NOTE:** The location of the dash pad nuts is shown in Photo 22, below.

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**Passenger Compartment Disassembly**
(Vehicles without Factory Air)

1. Remove the glove box door by removing the (2) screws on the door hinge and the one screw on the cable (See Photo 1, below).
2. Remove the glove box by removing (6) screws (See Photo 2, below).
3. Remove the glove box by removing the (6) screws around the glove box and (2) glove box door latch screws (See Photo 2, below). **NOTE:** The door latch screws must be removed to allow clearance when installing the new glove box.
4. Disconnect the cables and wiring from the OEM heater assembly.
5. Remove the OEM heater assembly by separating the rubber boot from fresh air inlet assembly (discard) (See Photo 3, below).
6. Remove the fresh air inlet assembly from the kick panel by removing the (5) OEM screws (See Photo 4, below).
Passenger Compartment Disassembly
(Vehicles without Factory Air)(Cont.)

7. Disconnect the control panel wiring and plugs (See Photo 5, below).
8. Remove the (2) nuts securing the control panel onto the inner dash (one on each side of the control panel) (See Photos 6 & 7, below).
9. Disconnect the control panel light and carefully remove the control panel from the dash.
10. To remove the radio, perform the following:
   A. Remove the knobs from the radio (See Photo 8, below).
   B. Remove the (2) mounting nuts and (2) bezel screws (See Photo 9, below).
   C. Remove the bezel.
   D. Remove the (2) radio dash mounting nuts and washers (See Photo 10, below).
   E. Remove the (2) radio bracket mounting nuts on the back of the radio (See Photos 11 & 12, below).
   F. Disconnect the antenna and the wiring, and remove the radio from the dash.
11. Disconnect the speedometer cable by loosening the speedometer cable nut and sliding it out of the instrument cluster (See Photo 13, below).
Passenger Compartment Disassembly
(Vehicles without Factory Air)(Final)

12. Remove the (8) instrument cluster bezel mounting screws (retain) (See Photos 14 & 15, below).
13. Unplug the instrument cluster wiring, and remove the instrument cluster (See Photo 16, below).
14. Remove the dash pad by removing the (14) dash pad nuts (retain) (See Photo 17, below). **NOTE:** The location of the dash pad nuts is shown in Photo 17, below.
15. Remove the defrost ducts and hoses from the dash defrost outlets.

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**Condenser Assembly and Installation**

1. Refer to separate instructions included with the condenser kit to install the condenser.
2. Binary switch installation (Refer to condenser instructions).

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**Compressor and Brackets**

1. Refer to separate instructions included with the bracket kit to install the compressor bracket.

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**Pulleys**

1. In most instances, the belt lengths will remain the same.
1. Locate the defrost ducts (See Photo 1, below).
2. Place a defrost duct into each of the dash defrost duct outlets (See Photos 2 & 3, below).
3. From under the dash, mark the (2) mounting holes onto the defrost ducts.
4. Remove the defrost ducts, and drill (2) 11/64” holes into each duct (See Figure 1, below).
5. Install each defrost duct into the dash defrost duct outlet, and secure them using (2) #8 x 1/2” pan head screws (See Photo 5, below).
6. Reinstall the dash pad at this time.
Passenger Side Wheel Well And Firewall Modification

1. Remove the passenger side inner fender kick panel grommet (discard) (See Photo 1, below).
2. Center the firewall A/C hose cover plate onto the passenger side inner fender kick panel opening. Using the cover plate as a template, mark and drill (2) 5/32” holes (See Photo 2, below).
3. Measure and mark the firewall insulation as shown in Photo 3, below. **NOTE:** The measurement starts at the kick panel and runs along the section where the firewall meets the floorboard.
4. Remove the measured section of insulation from the firewall and clean the area (See Photo 4, below).
5. Remove the OEM firewall insulation retainer (See Photo 5, below).
6. Enlarge the OEM firewall insulation retainer hole to 5/8” (See Photo 6, below).

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**Photo 1**
- Passenger Side Inner Fender Kick Panel Grommet

**Photo 2**
- Firewall A/C Hose Cover Plate 646954
- Mark and Drill (2) 5/32” Holes

**Photo 3**
- Mark and Measure Firewall Insulation
- 26”
- 6”
- 20”

**Photo 4**
- Remove Insulation and Clean Area

**Photo 5**
- Remove OEM Firewall Insulation Retainer

**Photo 6**
- Enlarge Hole to 5/8”
Engine Compartment, Passenger Side Inner Fender Modification

1. On the passenger side inner fender under the battery tray, locate the OEM hole (See Photo 1, below). Enlarge the hole to 7/8” to accommodate the #10 A/C hose bulkhead fitting (See Photo 2, below).

2. Directly under the recently enlarged hole, in the middle of indented section of the inner fender, mark and drill a 9/32” hole for the compressor lead grommet (See Photo 3, below).

7. Using the heater line opening closest to the passenger side for reference, mark and drill a 1 ¼” hole directly under the heater line hole on the beveled ledge (See Photos 7 & 8, below). NOTE: Do not enlarge the hole more than 1 ¼” for the grommet installation.

8. Install a 1/2” ID x 1 ¼” OD grommet into the 1 ¼” hole (See Photo 9, below).
1. Locate the delete plate (See Figure 1, below).
2. Apply silicone to the mating surface of the delete plate and place it vertically over the A/C lines opening on
   firewall (See Figure 2, and Photo 3, below).
3. Secure the delete plate to the firewall using (2) OEM screws (See Photo 4, below).

![Delete Plate Mating Surface](Photo 1)

![Silicone](Photo 2)

Place Delete Plate over A/C Lines Opening

Attach Delete Plate with (2) OEM Screws

![Delete Plate](Delete Plate)

![Silicone](Silicone)
NOTE: For proper operation of the evaporator unit, Vintage Air recommends using heat-blocking insulation in the area around the subcase (firewall, inner cowl and kick panel). Due to tight clearance for the evaporator unit between the firewall and dash, Vintage Air recommends an insulation thickness of no more than 1/4”.

1. Locate the evaporator firewall bracket as shown in Photo 1, below. Place the evaporator firewall bracket onto the firewall, and trace around the base of the bracket as shown in Photos 2, 3, and 4, below.

2. Using spray adhesive, install the new heat-blocking insulation in the area of the firewall that was removed, being careful not to cover the marked area from the evaporator bracket base and the 1/2” ID x 1 ¼” OD grommet (See Photos 5 & 6, below). **NOTE: During the evaporator installation, if the evaporator unit does not fit properly, look for places where the insulation may be interfering with the evaporator clearance. Trim the insulation as needed.**

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**Photo 1**

![Evaporator Firewall Bracket](Image)

**Photo 2**

![Temporarily Install Evaporator Firewall Bracket](Image)

**Photo 3**

![Trace Around Base of Evaporator Firewall Bracket](Image)

**Photo 4**

![Trace Around Base of Evaporator Firewall Bracket](Image)

**Photo 5**

![Apply Spray Adhesive on Area Where Insulation was Removed](Image)

**Photo 6**

![Do Not Install Insulation Inside Evaporator Firewall Bracket Tracing Marks](Image)

![Do Not Install Insulation over 1/2” ID x 1 ¼” OD Grommet](Image)
**A/C Hose Routing & Kick Panel Cap Installation**

**NOTE:** Standard torque specifications:
- #6: 11 to 13 ft-lb.
- #8: 15 to 20 ft-lb.
- #10: 21 to 27 ft-lb.

1. Locate the passenger side headlight wiring hole on the core support, and measure 1 ½” below the hole. Drill a 7/32” hole as shown in Photo 1, below.

2. Locate the #10 bulkhead/evaporator A/C hose, (See Photo 2, below), and install the end of the hose with the 90° hose fitting through the inner fenderwell (See Photo 3, below). **NOTE:** The 90° bulkhead fitting will restrict the A/C hose from going through the inner fenderwell (See Figure 1, and Photo 3, below).

3. Secure the #10 A/C hose to the core support using a #10 Adel clamp, a 10-32 x 1/2” screw and a 10-32 nut with star washer (See Photo 4, below).

4. Locate the #6 drier/evaporator hose (See Photo 2, below), and install it onto the drier with a properly lubricated O-ring (See Figure 1, above, and Photo 5, below).

**NOTE:** Soapy water may be used to ease insertion of the A/C hoses through the grommets, but be sure the hoses are capped to prevent water from getting inside.

---

**Lubricating O-rings**

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

- #6 O-ring
- #8 O-ring
- #10 O-ring

Supplied Oil for O-rings

O-ring Installs Over Male Insert to Swaged Lip

Twist With This Wrench

Hold With This Wrench

Lubricating O-rings

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

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

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**Figure 1**

**Figure 2**

**Figure 3**

**Figure 4**

**Figure 5**
5. Route the A/C hoses into the channel on the inner fender, and install the (2) A/C hose fenderwell brackets onto the OEM bolts using (2) 5/16” nuts (See Photos 5, 6 & 7 below).

6. Secure the A/C hoses to the A/C hose fenderwell brackets using the supplied tie wraps (See Photos 5 & 7, below).

7. Locate the firewall cover plate and rubber boot (See Photo 8, below).

8. Route the 90° hose fitting of the #10 A/C hose through the firewall cover plate (See Photo 9, below).

9. Install the rubber boot onto the #10 A/C hose (See Photo 10, below).

10. Route the #6 A/C hose through the firewall cover plate and rubber boot (See Photo 11, below).

11. Install the rubber boot and the firewall cover plate using (2) #10 x 1/2” sheet metal screws into the previously drilled 5/32” holes in the inner fender kick panel grommet location (See Photo 12, below).

12. Route the #6 and #10 A/C hoses through the kick panel opening in the passenger compartment.
13. Locate the kick panel cap (See Photo 13, below).
14. Install (2) large grommets into the kick panel cap (See Photo 14, below).
15. Route the 90° hose fitting of the #10 bulkhead/evaporator A/C hose through the right grommet in the kick panel cap (See Photo 15, below).
16. Route the straight hose fitting of the #6 drier/evaporator A/C hose through the left kick panel cap grommet (See Photo 16, below).
17. Apply silicone around the kick panel mating surface for a water tight seal (See Figure 1, below).
18. Install the kick panel cap onto the kick panel opening, and secure using (5) #14 x 3/4” sheet metal screws (See Photo 17, below).

Kick Panel Cap 646957

(2) Large Grommet 33137-VUI

Route #10 A/C Hose 90° Fitting Through Right Grommet

Apply Silicone Around Mating Surface of Kick Panel

(5) #14 x 3/4” Sheet Metal Screws

Route #6 A/C Straight Hose Fitting Through Left Grommet
19. Using the kick panel caps upper left hole as a template, drill a 3/16” hole into the kick panel (See Photo 18, below). **NOTE: Some vehicles may have this hole predrilled.**

20. Install a #14 x 3/4” sheet metal screw into the upper left hole of the kick panel cap into the kick panel (See Photo 19, below).

**Wiring Installation**

1. Disconnect the circuit breaker from the main wiring harness (See Photo 1, below).
2. Enlarge the hole on the relay mounting tab to accommodate the #14 x 3/4” sheet metal screw installed on the kick panel cap (See Photo 2, below).
3. Route the heater control valve plug through the 3/8” ID x 7/8” OD grommet (See Photo 3, below).
Wiring Installation (Cont.)

4. Install the 3/8" ID x 7/8" OD grommet into the previously enlarged 5/8" firewall insulation retainer hole (See 4, below).
5. Route the red, white and blue wires from the main wiring harness through the 3/8" ID x 7/8" OD grommet into the engine compartment (See Photo 5, below).
6. Remove the #14 x 3/4" sheet metal screw from the top left of the kick panel cap, and install the heater control valve ground lead (See Photo 5, below).
7. Remove the #14 x 3/4" sheet metal screw from the top right of the kick panel cap, and install the main wiring harness relay between the screw and kick panel cap (See Photo 6, below).
8. Plug the white connector from the heater control valve into the white connector on the main wiring harness (See Photo 7, below).
9. Plug the white connector from the blower motor into the white connector on the main wiring harness (See Photo 8, below)
10. Route the red and white wires along the top of the inner fender toward the battery in the engine compartment (See Photo 9, below).
11. Route the blue wire from the main wiring harness between the firewall and the back of the inner fender. Run the blue wire along the #10 A/C hose securing it to the hose with the supplied tie wraps (See Photos 10 & 11, below).

12. Crimp the supplied 1/4” female terminal to the blue wire, and connect it to the safety switch on the drier (See Photos 12 & 13, below).

13. Place the circuit breaker onto the vehicle body, and secure it using (2) #10 x 1/2” sheet metal screws. Reconnect the positive wires to the circuit breaker (See Photo 14, below).

14. Crimp the supplied 5/16” ring terminals to the white ground wires, and connect them to the negative side of the battery (See Photo 15, below).
Evaporator Firewall Bracket &
Heater Hardline Installation

1. Locate the (2) heater hardlines (See Photo 1, below) and the evaporator firewall bracket (See Photo 2, below).
2. Install a 1/4-20 x 1 ½” stud into the bottom hole on the evaporator firewall bracket, leaving a 1/2” of the stud protruding outward (See Photo 3, below).
3. Install the evaporator firewall bracket onto the evaporator unit using (4) 1/4-20 x 1/2” bolts (supplied on the evaporator sub case) (See Photo 4, below).
4. Install the #10 heater intake hardline with a properly lubricated O-ring onto the evaporator unit lower heater coil fitting (See Figure 1, Page 21, and Photo 5, below).
5. Install the #10 heater water pump hardline with a properly lubricated o-ring onto the evaporator upper heater coil fitting. (See Figure 1, Page 21, and Photo 6, below).

Heater Intake Hardline
081160

Heater Water Pump Hardline
081161

Evaporator Firewall Bracket
646953

安装1/4-20 x 1 ½” 螺栓到蒸发器防火隔板底部孔

安装蒸发器防火隔板到蒸发器单元

安装#10加热器进水硬线到下加热器线圈接头上

安装#10加热器水泵硬线到上加热器线圈接头上

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6
Evaporator Firewall Bracket & Heater Hardline Installation (Cont.)

6. Apply double-sided tape onto the evaporator firewall bracket as shown in Photo 7, below.

7. Remove the double-sided tape backing, and install the firewall rubber boot over the (2) heater hardlines. Keep the hardlines centered and tight inside the bracket holes (See Photo 8, below). **NOTE: Remove the heater line caps before installing the rubber boot. Replace the caps onto hardlines after rubber boot has been installed. Be sure the heater hardline holes and the threaded holes are centered with the firewall rubber boot holes for a correct fit.**

Evaporator Installation

**NOTE:** To ensure a watertight seal between the passenger compartment and the vehicle exterior Vintage Air recommends coating the threads of all bolts passing through the firewall with silicone prior to installation.

1. Clean the back of the dash, to the right of the glove box on the inner dash, where the ECU is to be mounted (See Photos 1 & 2, below).

2. Place the evaporator unit on the passenger side floorboard, and install the #6 drier/evaporator A/C hose onto the expansion valve with a properly lubricated #6 O-ring (See Figure 1, Page 21, and Photo 3, below).
Evaporator Installation (Cont.)

NOTE: The fitment of the evaporator unit into the proper position under the dash is very tight. Follow the steps below to help with the installation. Remove the caps from the hardlines before installation.

3. Rotate the evaporator unit blower end up first, and angle the bottom of the evaporator toward the dash (See Figure 1, below).

4. Rotate/push the left end of the evaporator unit up until the hardline ends and the 1/4-20 x 1 ½” stud line up with the holes in the firewall (See Figure 2, below). **NOTE:** Be careful positioning the heater hardlines. Forcing or jamming the hardlines against the firewall may loosen one or both of the fittings on the heater which could result in a leak. A 2” x 4” block of wood may be put between the dash and the evaporator unit to keep it in place if necessary (See Photo 5, below).

5. Reinstall the caps onto the heater hardlines.

6. From the engine compartment, install (2) 1/4” nylon sleeve washers and (2) 1/4-20 x 3/4” serrated flange hex bolts into the (2) open firewall mounting holes (See Photo 5, below). **NOTE:** Do not fully tighten the bolts at this time.

7. Remove the 1/4-20 x 1 ½” stud from the evaporator firewall bracket, and insert a 1/4” nylon sleeve washer and 1/4-20 x 3/4” serrated flange hex bolt (See Photo 6, below). **NOTE:** Do not fully tighten the bolt at this time.

8. Install the 90° fitting of the #10 bulkhead/evaporator A/C hose to the evaporator unit #10 fitting with a properly lubricated #10 O-ring (See Figure 1, Page 21, and Photo 7, below).

![Figure 1](image1.png)

**Figure 1**

![Figure 2](image2.png)

**Figure 2**

![Photo 4](image4.png)

Remove 1/4-20 X 1 1/2” Stud, and Insert 1/4” Nylon Sleeve Washer and 1/4-20 X 3/4” Serrated Flange Hex Bolt

![Photo 5](image5.png)

Install (2) 1/4” Nylon Sleeve Washers and (2) 1/4-20 x 3/4” Serrated Flange Hex Bolts

![Photo 6](image6.png)

![Photo 7](image7.png)

Install 90° Fitting of #10 Bulkhead/Evaporator A/C Hose onto Evaporator Unit #10 Fitting
9. Insulate the #10 evaporator fitting and all exposed metal with the supplied press tape (See Photo 8, below).

10. Remove the ECU from the evaporator unit and carefully clip the tie wraps from the wires. Apply (2) strips of Velcro to the back of the ECU as shown in Photo 9, below.

11. Locate the evaporator dash bracket (See Photo 10, below).

12. Remove the flange hex bolt from the evaporator unit, and install the evaporator dash bracket onto the upper hole (See Photo 11, below). Using the dash bracket as a template, mark and drill (2) 13/64” holes into the bottom of the dash (See Photo 11, below). **NOTE: If the vehicle has predrilled holes in the bottom of the dash, proceed to Step 13.**

13. Remove the evaporator dash bracket from the evaporator unit, and install (2) #8 U-nuts onto it (See Photo 12, below).

14. Install the evaporator dash bracket under the dash, and secure it with (2) #8 x 1” oval head screws.

15. Install the evaporator dash bracket onto the evaporator unit using the flange hex bolt (See Photo 14, below). **NOTE: Do not fully tighten the bolt at this time.**
Radio Installation

NOTE: Reinstall the radio directly after installing the evaporator unit and before installing the new control panel.

1. Reconnect the antenna and wiring.
2. Install the (2) radio bracket nuts and washers (See Photos 1 & 2, below).
3. Install the (2) radio dash mounting nuts and washers (See Photo 3, below).
4. Install the radio bezel using (2) bezel screws and (2) mounting nuts (See Photo 4, below).
5. Install the radio knobs (See Photo 5, below).

Control Panel Installation

1. Install the converted control panel into the dash using the OEM nuts, routing the wiring toward the ECU on the passenger side (See Photos 1 & 2, below).
2. Plug the control panel wiring into the ECU (See Photo 3, below).
Evaporator Unit Leveling

NOTE: To ensure proper drainage, it is very important that the evaporator is level, both fore-aft and left-right. Before leveling the evaporator, ensure the vehicle is level.

1. Level the unit left-right and fore-aft (See Photo 1, below).

2. At this time, tighten the (3) 1/4-20 x 3/4” serrated flange hex bolts on the firewall (See Photo 2, below). NOTE: Tighten all bolts on the firewall first.

3. Tighten the dash bracket evaporator flange hex bolt (See Photo 3, below). NOTE: Adjust the evaporator dash bracket as needed, then tighten the evaporator button head bolt.

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**Photo 1**

**Photo 2**

**Photo 3**
1. Locate the passenger side plenum assembly louver bezel and the (3) louvers without hose adapters (See Photo 1, below).

2. Install the (2) 10-32 x 1 ¼” hex machine screws, (2) 10-32 nuts with star washers, and (4) #8 flat washers approximately 3/4” into the passenger side plenum assembly louver bezel and into the OEM holes under the dash (See Photos 2, 3 & 4, below, and Figure 1, Page 34). **NOTE: Do not fully tighten the nuts at this time.**

3. Look at the plenum assembly through the glovebox opening, and ensure that the S-clip on the dash inlet of the plenum assembly is installed onto the evaporator unit dash outlet. If not, you may need to lightly push the evaporator unit toward the firewall and push up on the plenum assembly to properly install the dash inlet (See Photos 5 & 6, below, and Figure 1, Page 34).
5. After ensuring that the plenum assembly is in the proper position, tighten the (2) 10-32 nuts with star washers on the carriage bolts (See Photo 7, below).
6. Install the (3) louveres without hose adapters into the plenum assembly (See Photo 8, below).

**NOTE:** During the installation of the defrost duct hoses, ensure there is enough clearance around the passenger side windshield wiper assembly for the wiper arm to move freely.
### Driver Side Underdash Louver Installation

1. Remove the OEM screw from under the dash on the driver side (See Photo 1, below).
2. Locate the driver side underdash louver bezel, driver side louver housing bracket, the louver with hose adapter, and the #8 x 3/4” countersunk screw (See Photo 2, below).
3. Place the driver side louver housing bracket into the driver side underdash louver bezel, making sure it is all the way in and flushed to the top of the bezel. Using the bracket as a template, mark the mounting hole of the bracket onto the bezel (See Photo 3, below).
4. Remove the bracket and drill a 7/32” hole into the bezel (See Photo 4, below).
5. Install the driver side underdash louver bezel onto the dash using a #8 x 3/4” countersunk screw as shown in Photo 5, below.
6. Route the duct hose from the passenger side plenum assembly louver bezel to the driver side louver bezel, and insert it through the bezel opening 2 to 3 inches (See Photo 6, below).
7. Install the duct hose onto the louver hose adapter (See Photo 7, below).
8. Insert the louver into the louver bezel (See Photo 8, below).
1. Cut an 8” piece of drain hose and attach the drain elbow to one end. Install the drain elbow into the 1/2” ID x 1 ¼” OD grommet on the firewall (See Photo 1, below).

2. Install the 7” piece of drain hose between the evaporator unit drain outlet and the drain elbow (See Photo 2, below).
ECU Wiring Harness Installation

1. Route the violet power wire to a switched 12V power source on the fuse panel (See Photo 1, below). **NOTE:** This requires a male fuse extension (not supplied) (See Photo 2, below).
2. Plug the main wiring harness into the ECU (See Photo 3, below).
3. The correct ECU harness installation locations are shown in Figure 1, below.
4. Peal the backing from the Velcro, and mount the ECU behind the dash next to the glove box opening (See Photo 4, below). **NOTE:** At this point, reinstall the speedometer cable and plugs into the instrument cluster and install it into the dash with the OEM hardware (See Photos 5 & 6, below).

- **Photo 1:** Route Violet Power Wire to Switched 12V Power Source on Fuse Panel
- **Photo 2:** Male Fuse Extension
- **Photo 3:** Plug Main Harness into ECU
- **Photo 4:** Peal Backing From Velcro And Mount ECU Behind Dash Next To Glove Box Opening
- **Figure 1:**
- **Photo 5:** Reconnect Speedometer Cable
- **Photo 6:** Reconnect Instrument Cluster Wiring and Install Instrument Cluster
Glove Box Installation

1. Locate the glove box (See Photo 1, below).
2. Install the glove box by inserting the right side of the glove box into the dash first (See Photo 2, below).
3. Push the left side of the glove box into the dash, then slide the glove box to the left to align the glove box with the dash mounting holes (See Photo 3, below). **NOTE: If the glove box door hinge holes do not line up to the correct locations, slightly notch the corner of the hinge where it hits the glovebox (See Photo 4, below).**
4. Secure the glove box to the dash using (6) #8 x 1/2” screws (See Figure 1, below).
5. Install the glove box door latch using the (2) OEM screws (See Photo 5, below).
6. Install the glove box door using the (3) OEM screws ((2) for the lower mounts and one for the door cable (See Photo 6, below)).
Heater Control Valve Installation

NOTE 1: Vintage Air Systems use 5/8” connections. On engines equipped with 3/4” hose nipples, these will need to be removed and replaced with 5/8” nipples (not supplied). For water pumps with a cast-in 3/4” heater outlet, a 3/4” x 5/8” reducer fitting (not supplied) or molded hose (Vintage Air Part # 099010) will need to be installed in the heater hose.

1. Attach a 5” piece of heater hose (not supplied) to the heater control valve, and secure it using a #12 hose clamp (See Figure 1 and Photo 1, below).
2. Install the heater hose on the heater control valve onto the lower heater hardline (right side), and secure it using a #12 hose clamp (See Photo 2, below). **NOTE: Ensure proper flow direction through the heater control valve (the flow direction follows the molded arrow on the valve).**
3. Install a length of heater hose (not supplied) from the intake manifold to the heater control valve, and secure it using (2) #12 hose clamps (See Photo 3, below).
4. Install a length of heater hose (not supplied) from the heater core to the water pump, and secure it using (2) #12 hose clamps (See Photo 4, below).
5. Plug the heater control valve connector into the connector on the main wiring harness (See Photo 5, below).
A/C Hose Installation

Standard Hose Kit:
1. Locate the #8 condenser/compressor A/C hose (See Photo 1, below).
2. Install and lubricate (2) #8 O-rings (See Figure 1, Page 21), and connect the 90° fitting with the service port to the #8 discharge port on the compressor (See Photo 2, below). Tighten fitting connection (See Figure 1, Page 21).
3. Route the 45° fitting to the #8 condenser/core hardline coming from the condenser (See Photo 3, below). Tighten fitting connection (See Figure 1, Page 21).
4. Locate the #10 compressor/bulkhead A/C hose (See Photo 1, below).
5. Install and lubricate (2) #10 O-rings (See Figure 1, Page 21), and connect the #10 135° fitting with the service port to the #10 suction port on the compressor (See Photo 4, below). Tighten fitting connection (See Figure 1, Page 21).
6. Connect the #10 45° fitting to the #10 bulkhead fitting (See Photo 5, below). Tighten fitting connection (See Figure 1, Page 21).

Modified Hose Kit:
1. Refer to separate instructions included with modified hose kit.

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**Photo 1**
- #8 Condenser/Compressor A/C Hose 082051
- #10 Compressor/Bulkhead A/C Hose 082072

**Photo 2**
- Connect #8 A/C Hose 90° Fitting with Service Port to #8 Discharge Port on Compressor

**Photo 3**
- Route #8 A/C Hose 45° Fitting to #8 Condenser/Core Hardline Coming from Condenser

**Photo 4**
- Connect #10 A/C Hose 135° Fitting with Service Port to #10 Suction Port on Compressor

**Photo 5**
- Connect #10 A/C Hose 45° Fitting to #10 A/C Hose Bulkhead Fitting
Wiring Final Steps

1. Install the 1/4” grommet into the previously drilled 9/32” hole on the inner fender under the #10 bulkhead fitting (See Photos 1 & 2, below).
2. Locate the compressor lead wire, and cut off the 1/4” female terminal as shown in Photo 3, below.
3. Connect the bullet terminal of the compressor lead to the compressor bullet terminal (See Photo 4, below).
4. Route the compressor lead wire along the #10 A/C hose and through the 1/4” grommet into the fenderwell (See Photo 5, below). Secure the compressor lead wire to the #10 A/C hose with the supplied tie wraps.
5. Under the fenderwell, continue routing the compressor lead along the #10 A/C hose toward the drier. Crimp a 1/4” female terminal onto the compressor lead, and connect it to the safety switch (See Photo 6, below).
6. Secure the compressor lead to the #10 A/C hose with tie wraps.
1. Reinstall all previously removed items.
2. Fill 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 operated. Failure to follow antifreeze recommendations will cause heated core to corrode prematurely and possibly burst in A/C mode and/or freezing weather, voiding your warranty.
3. Double check all fittings, brackets and belts for tightness.
4. Vintage Air recommends that all A/C systems be serviced by a licensed automotive A/C technician.
5. Evacuate the system for a minimum of 45 minutes prior to charging, and perform a leak check prior to servicing.
6. Charge the system to the capacities stated on Page 4 of this instruction manual.
7. See the Operation of Controls procedures on Page 45 of this instruction manual.
** Dash Lamp Is Used Only With Type 232007-VUR Harness.

** Warning: Always Mount Circuit Breaker As Close to the Battery As Possible. (NOTE: Wire Between Battery and Circuit Breaker Is Unprotected and Should Be Carefully Routed to Avoid a Short Circuit).

*** Wide Open Throttle Switch Contacts Close Only at Full Throttle, Which Disables A/C Compressor.
NOTE: MOUNT RELAY IN DESIRED LOCATION UNDER DASH

NOTE: HEATER CONTROL VALVE CONNECTION AND CHASSIS GROUND MAY BE LOCATED ON EITHER SIDE OF THE FIREWALL. ENSURE CONNECTOR IS LATCHED FIRMLY.

NOTE: CONNECT WHITE WIRES DIRECTLY TO (-) BATTERY TERMINAL

WARNING: ALWAYS MOUNT CIRCUIT BREAKER AS CLOSE TO THE BATTERY AS POSSIBLE. (NOTE: WIRE BETWEEN BATTERY AND CIRCUIT BREAKER IS UNPROTECTED AND SHOULD BE CAREFULLY ROUTED TO AVOID A SHORT CIRCUIT).

Circuit Breaker/Battery:
White Must Run To (-) Battery. Red May Run To (+) Battery Or Starter. Mount Circuit Breaker As Close to Battery As Possible.

NOTE: YELLO & ORANGE COMING FROM HARNESS ARE NOT USED.

Terminology:
- A/C COMPRESSOR RELAY
- CONTROL WIRING HARNESS
- BATRUN 12V
- IGNITION SW
- DASH BACK LIGHT +0-12v
- GRAY WIRE IS USED FOR PROGRAMING CONTROLS IF APPLICABLE
- IGNITION SWITCH
- IGNITION HOT TERMINAL
- YELLOW & ORANGE COMING FROM HARNESS ARE NOT USED.

WARNING: ALWAYS MOUNT CIRCUIT BREAKER AS CLOSE TO THE BATTERY AS POSSIBLE. (NOTE: WIRE BETWEEN BATTERY AND CIRCUIT BREAKER IS UNPROTECTED AND SHOULD BE CAREFULLY ROUTED TO AVOID A SHORT CIRCUIT).

Gen IV Wiring
Connection Instruction

Ignition Switch:
Violet 12V Ign Switch Source (Key On Accessory) Position Must Be Switched.

Dash Light:
Tan Wire Used Only With Vintage Air Supplied Control Panel With LED Back Light.

Heater Control Valve:
Install With Servo Motor Facing Down, As Shown. Note Flow Direction Arrow Molded Into Valve Body, And Install Accordingly.

Binary/Trinary & Compressor:
Binary: Connect As Shown (Typical Compressor Wiring). Be Sure Compressor Body Is Grounded.
Trinary Switch: Connect According To Trinary Switch Wiring Diagram.
Operation of Controls

On Gen IV systems with three lever/knob controls, the temperature control toggles between heat and A/C operations. To activate A/C, move the temperature lever/knob all the way to cold and then back it off to the desired vent temperature. For heat operation, move the temperature lever/knob all the way to hot and then adjust to the desired vent temperature. The blower will momentarily change speed, each time you toggle between operations, to indicate the change. **NOTE: For proper control panel function, refer to the control panel instruction for calibration procedure.**

**Blower Speed**
- This lever/knob controls blower speed, from OFF to HI.

**Mode Control**
- This lever/knob controls the mode positions, from DASH to FLOOR to DEFROST, with a blend in between.

**Temperature Control**
- This lever/knob controls the temperature, from HOT to COLD.

**A/C Operation**
- Adjust to desired speed.
- **Mode Control**
  - Adjust to desired mode position (DASH position recommended).
  - For A/C operation, adjust to coldest position to engage compressor (Adjust between HOT and COLD to reach desired temperature).

**Heat Operation**
- Adjust to desired speed.
- **Mode Control**
  - Adjust to desired mode position (FLOOR position recommended).
  - For maximum heating, adjust to hottest position (Adjust between HOT and COLD to reach desired temperature).

**Defrost/De-fog Operation**
- Adjust to desired speed.
- **Mode Control**
  - Adjust to DEFROST position for maximum defrost, or between FLOOR and DEFROST positions for a bi-level blend (Compressor is automatically engaged).
## Troubleshooting Guide

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Condition</th>
<th>Checks</th>
<th>Actions</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a.</td>
<td>Blower stays on high speed when ignition is on.</td>
<td>Check for damaged pins or wires in control head plug.</td>
<td>Verify that all pins are inserted into plug. Ensure that no pins are bent or damaged in ECU.</td>
<td>Loss of ground on this wire renders control head inoperable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check for damaged ground wire (white) in control head harness.</td>
<td>Verify continuity to chassis ground with white control head wire at various points.</td>
<td>See blower switch check procedure.</td>
</tr>
<tr>
<td></td>
<td>All other functions work.</td>
<td>Check for damaged blower switch or potentiometer and associated wiring.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1b.</td>
<td>Blower stays on high speed when ignition is on or off.</td>
<td>Unplug 3-wire BSC control connector from ECU. If blower shuts off, ECU is either improperly wired or damaged.</td>
<td>Be sure the small, 20 GA white ground wire is connected to the battery ground post. If it is, replace the ECU.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unplug 3-wire BSC control connector from ECU. If blower stays running, BSC is either improperly wired or damaged.</td>
<td>Check to ensure that no BSC wiring is damaged or shorted to vehicle ground. The BSC operates the blower by ground side pulse width modulation switching. The positive wire to the blower will always be hot. If the &quot;ground&quot; side of the blower is shorted to chassis ground, the blower will run on HI.</td>
<td>No other part replacements should be necessary.</td>
</tr>
<tr>
<td>2.</td>
<td>System is not charged.</td>
<td>System must be charged for compressor to engage.</td>
<td>Charge system or bypass pressure switch.</td>
<td>Danger: Never bypass safety switch with engine running. Serious injury can result.</td>
</tr>
<tr>
<td></td>
<td>Compressor will not turn on (All other functions work).</td>
<td>Check for faulty A/C potentiometer or associated wiring (Not applicable to 3-pot controls).</td>
<td>Check continuity to ground on white control head wire. Check for 5V on red control head wire.</td>
<td>To check for proper pot function, check voltage at white/blue wire. Voltage should be between 0V and 5V, and will vary with pot lever position.</td>
</tr>
<tr>
<td></td>
<td>System is charged.</td>
<td>Check for disconnected or faulty thermistor.</td>
<td>Check 2-pin connector at ECU housing.</td>
<td>Disconnected or faulty thermistor will cause compressor to be disabled.</td>
</tr>
<tr>
<td>3.</td>
<td>Compressor will not turn off (All other functions work).</td>
<td>Check for faulty A/C potentiometer or associated wiring.</td>
<td>Repair or replace pot/control wiring.</td>
<td>Red wire at A/C pot should have approximately 5V with ignition on. White wire will have continuity to chassis ground. White/Blue wire should vary between 0V and 5V when lever is moved up or down.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check for faulty A/C relay.</td>
<td>Replace relay.</td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td>Condition</td>
<td>Checks</td>
<td>Actions</td>
<td>Notes</td>
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<tr>
<td>4.</td>
<td>System will not turn on, or runs intermittently.</td>
<td>Works when engine is not running; shuts off when engine is started (Typically early Gen IV, but possible on all versions).</td>
<td>Noise interference from either ignition or alternator.</td>
<td>Install capacitors on ignition coil and alternator. Ensure good ground at all points. Relocate coil and associated wiring away from ECU and ECU wiring. Check for burned or loose plug wires.</td>
</tr>
<tr>
<td></td>
<td>Will not turn on under any conditions.</td>
<td>Verify connections on power lead, ignition lead, and both white ground wires.</td>
<td>Verify battery voltage is greater than 10 volts and less than 16.</td>
<td>Verify proper meter function by checking the condition of a known good battery.</td>
</tr>
<tr>
<td>5.</td>
<td>Loss of mode door function.</td>
<td>No mode change at all.</td>
<td>Check for damaged mode switch or potentiometer and associated wiring.</td>
<td>Check for positive power at heater valve green wire and blower red wire. Check for ground on control head white wire.</td>
</tr>
<tr>
<td></td>
<td>Partial function of mode doors.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Blower turns on and off rapidly.</td>
<td>Battery voltage is at least 12V.</td>
<td>Check for at least 12V at circuit breaker.</td>
<td>Ensure all system grounds and power connections are clean and tight.</td>
</tr>
<tr>
<td></td>
<td>Battery voltage is less than 12V.</td>
<td>Check for faulty battery or alternator.</td>
<td>Charge battery.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Erratic functions of blower, mode, temp, etc.</td>
<td></td>
<td>Check for damaged switch or pot and associated wiring.</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>8.</td>
<td>When ignition is turned on, blower momentarily comes on, then shuts off. This occurs with the blower switch in the OFF position.</td>
<td></td>
<td>Check for obstructed or binding mode doors.</td>
<td>Check for damaged step motor or wiring.</td>
</tr>
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</tbody>
</table>
## Packing List:
### Evaporator Kit (751153)

<table>
<thead>
<tr>
<th>No.</th>
<th>Qty.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1</td>
<td>744019</td>
<td>Gen IV Evaporator Sub Case</td>
</tr>
<tr>
<td>2.</td>
<td>1</td>
<td>791153</td>
<td>Accessory Kit</td>
</tr>
</tbody>
</table>

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