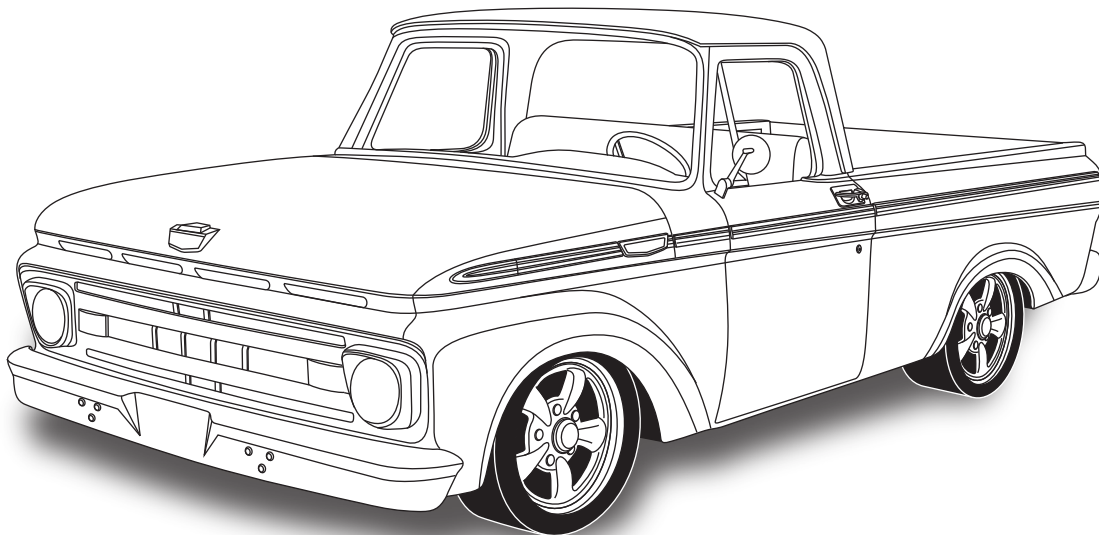




1961-65 Ford F-100

Condenser Kit *with* Drier
(011150)



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Parts Disclaimer: Please Read

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. Packing list located on last page of instructions.



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):

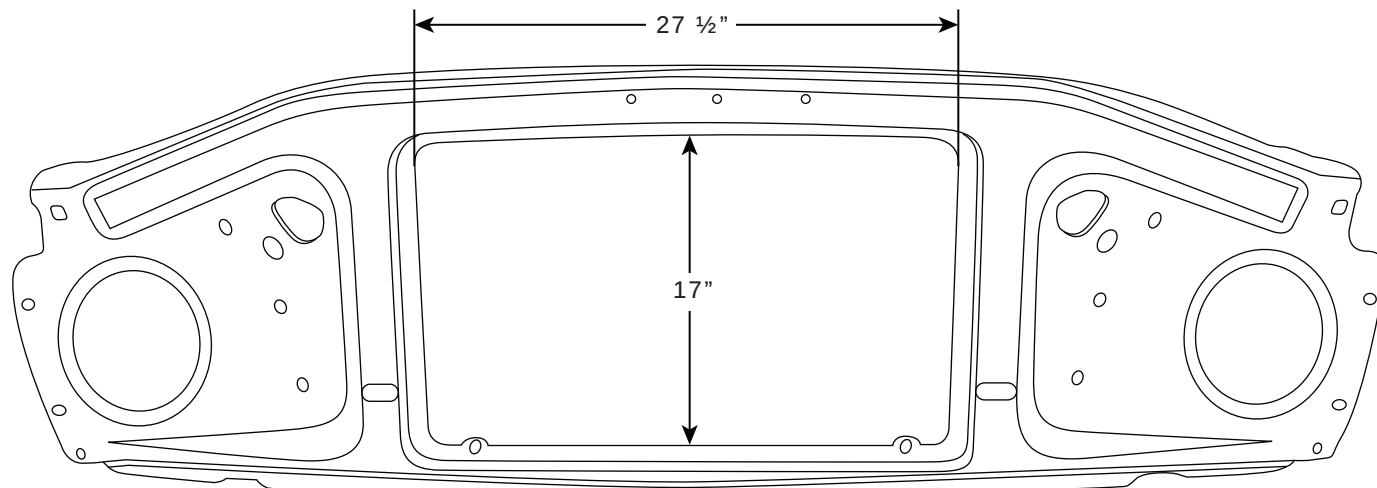
Heater hose may be purchased from Vintage Air (Part#31800-VUD) or your local parts retailer. Routing and required length will vary based on installer preference.



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Core Support Measurements

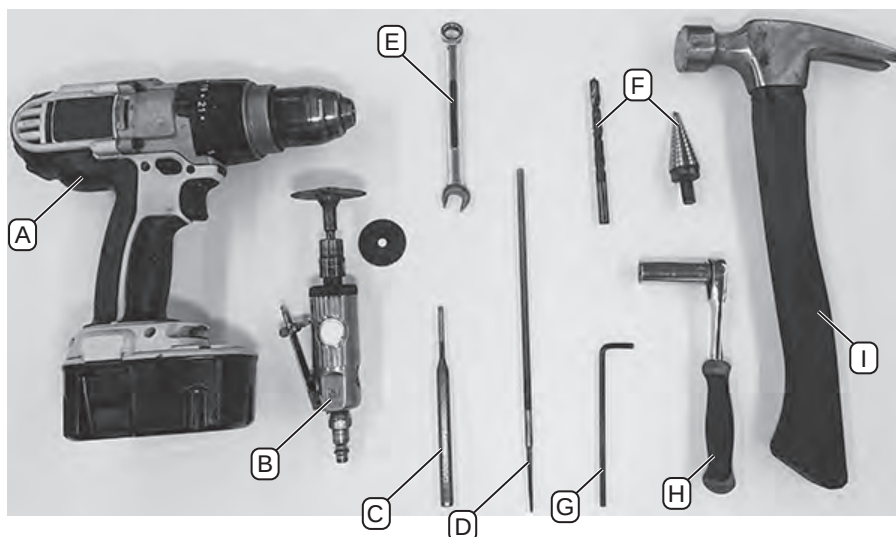
This kit was developed based on the measurements below, which were taken from a 1965 Ford F-100 without factory air.



Tools Required for Hood Latch Modification and Handle Installation

NOTE: Before beginning the condenser installation process, Vintage Air recommends gathering the following tools, as they will be needed for the Hood Latch Modification and Handle Installation procedures on Pages 6 and 7 of this instruction:

- A. Hand drill
- B. Grinder and small cut-off disc
- C. Punch
- D. File
- E. 7/16" wrench
- F. 5/16" drill bit (or step bit)
- G. 5/32" Allen key
- H. Ratchet with 1/2" socket
- I. Hammer





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Engine Compartment Disassembly

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. Remove the radiator by removing (4) bolts (retain) (See Photo 2, below).
5. Remove (2) bolts, washers and nuts located on the passenger side fender (retain) (See Photos 3 and 4, below).
6. Remove (1) bolt located on the passenger side of the core support (retain) (See Photo 4, below).
7. Remove (2) heater hoses from where they attach to the heater assembly at the firewall (discard) (See Photo 5, below).

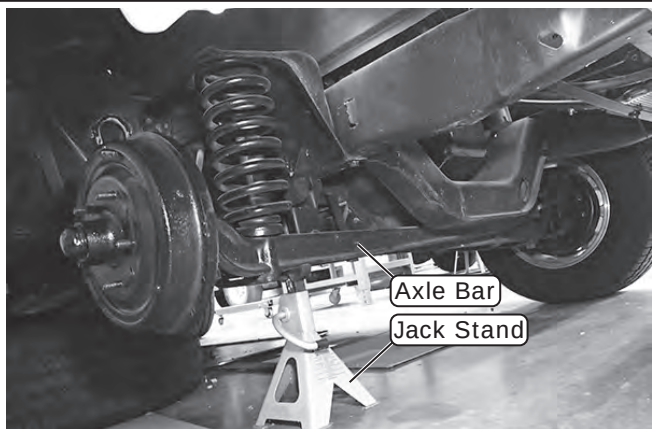


Photo 1

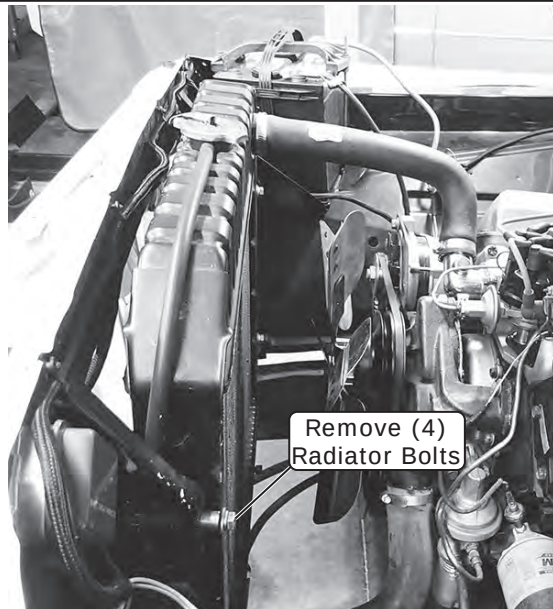


Photo 2

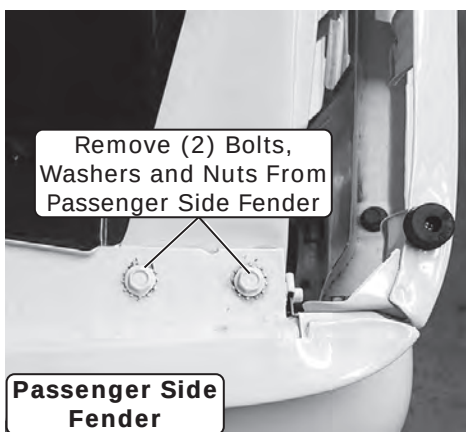


Photo 3

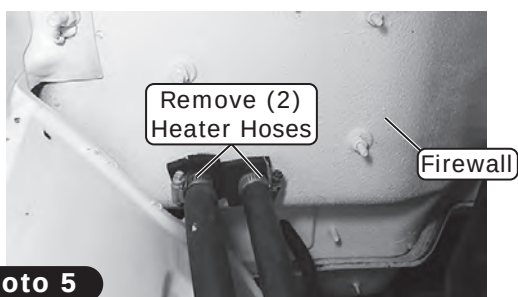


Photo 5

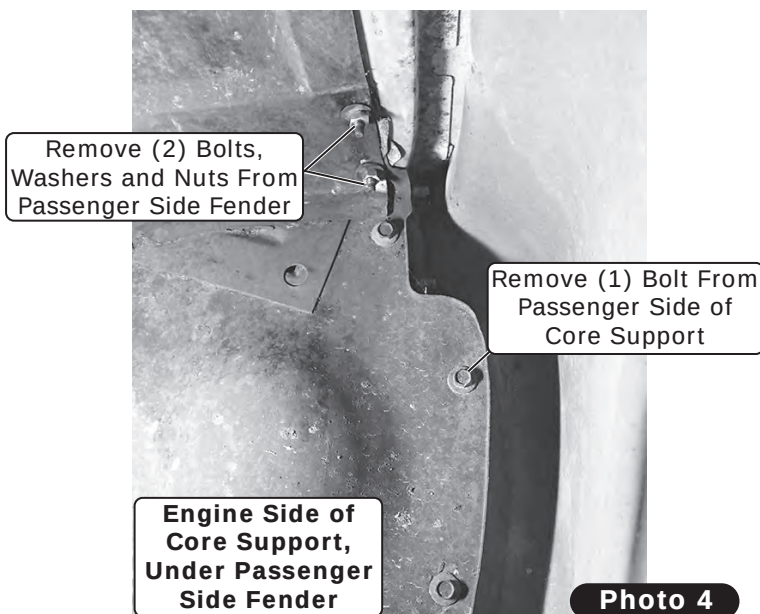


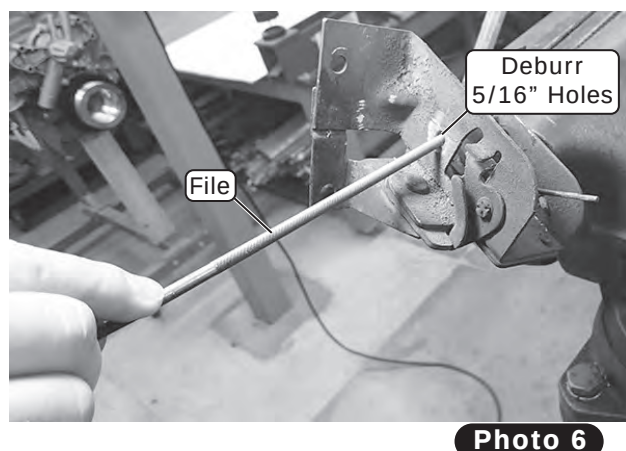
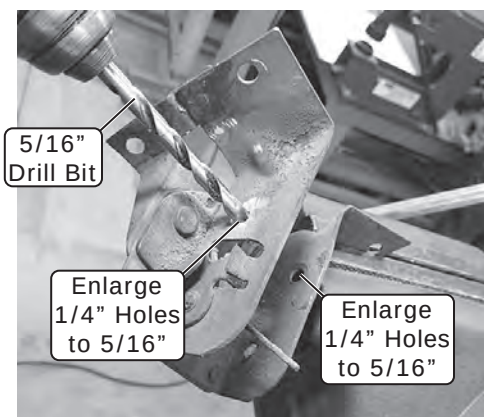
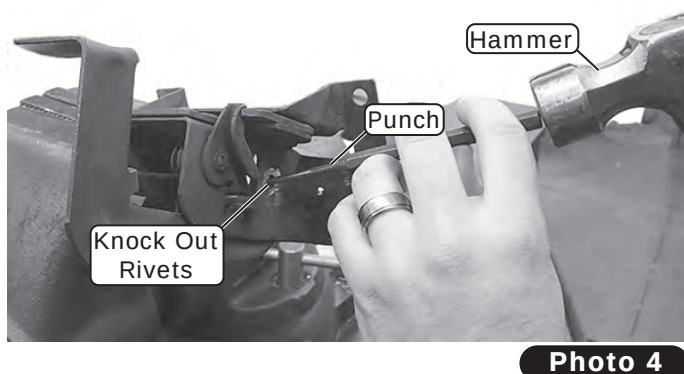
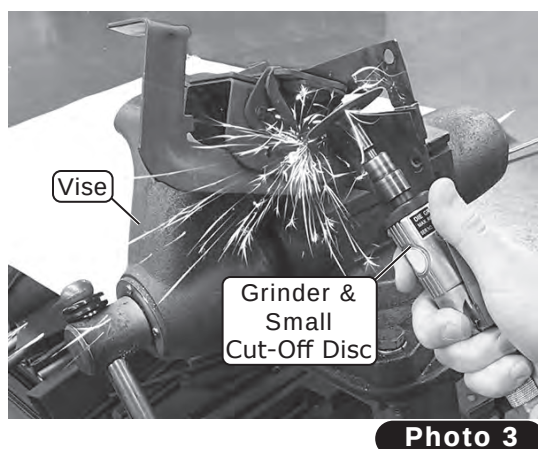
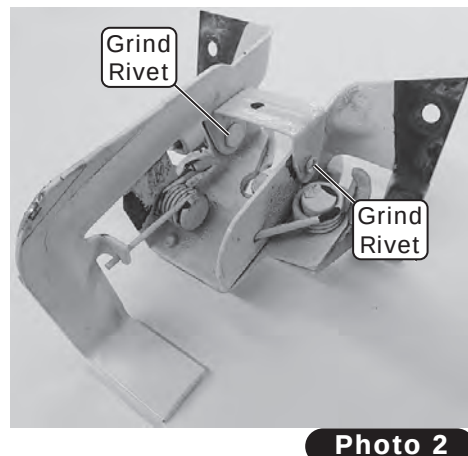
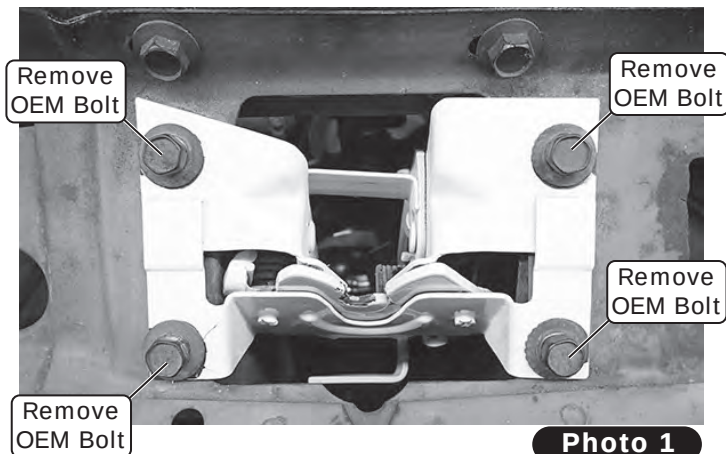
Photo 4



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Hood Latch Modification

1. Remove the (4) OEM hood latch bolts using a ratchet with 1/2" socket (retain) (See Photo 1, below). Remove the hood latch assembly (retain).
2. Place the hood latch assembly into a vise and remove the hood latch handle by grinding (2) rivets (See Photos 2 and 3, below). Use a hammer and punch to knock out the rivets (discard) (See Photo 4, below).
3. Using a 5/16" drill bit or a step bit, enlarge the 1/4" rivet holes to 5/16" (See Photo 5, below).
4. Use a file to deburr the 5/16" holes (See Photo 6, below).

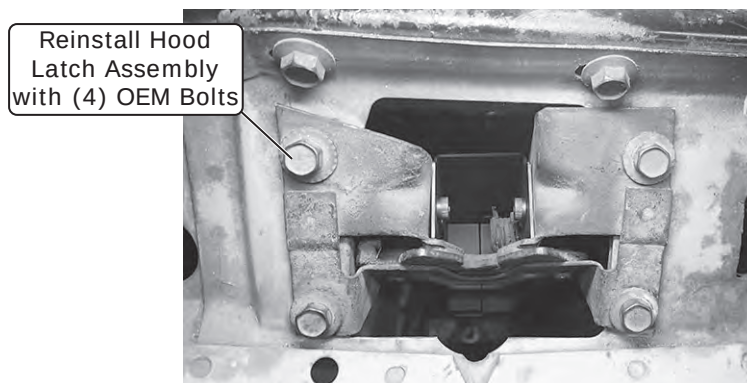
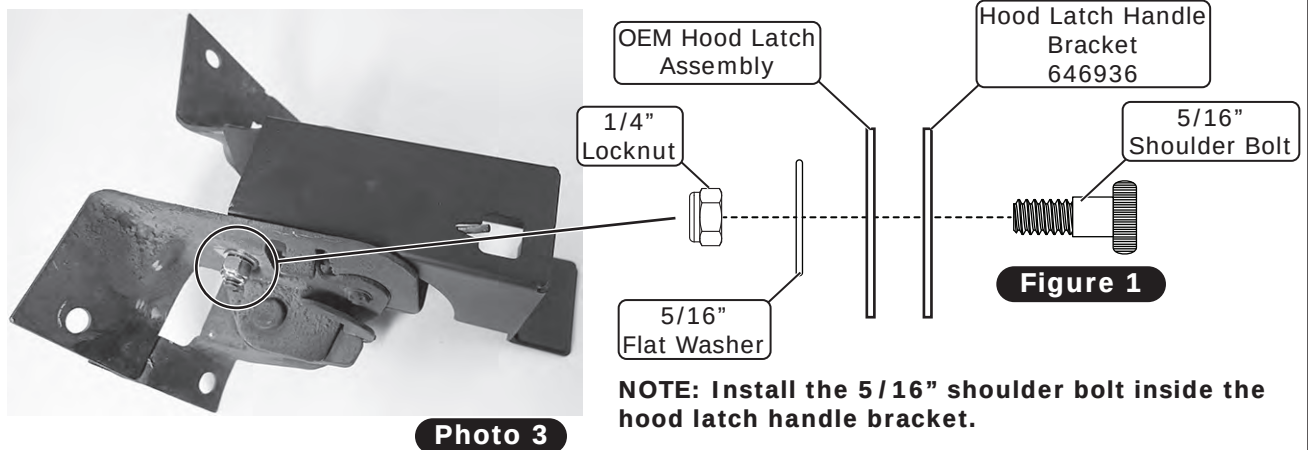
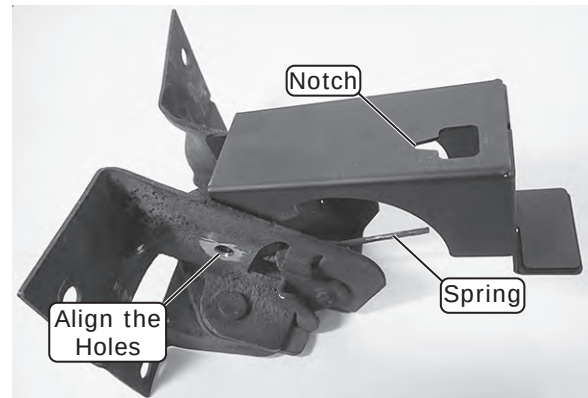
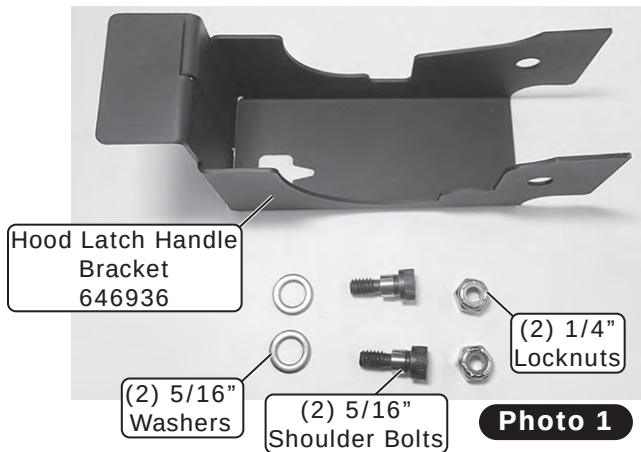




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Hood Latch Handle Installation

1. To install the new hood latch handle into the hood latch assembly, locate the following: Hood latch handle bracket, (2) 5/16" shoulder bolts, (2) 5/16" washers and (2) 1/4" locknuts (See Photo 1, below).
2. Insert the hood latch handle bracket into the hood latch handle assembly channel. Align the holes and insert the spring into the notch (See Photos 2 and 3, below).
3. Using a 7/16" wrench and a 5/32" Allen key, secure the new hood latch handle into the channel using (2) 5/16" shoulder bolts, (2) 5/16" flat washers, and (2) 1/4" locknuts (See Photo 3 and Figure 1, below). **NOTE: For a correct fit, make sure the 5/16" washer slides onto the shoulder of the bolt and not onto the threads.**
4. Reinstall the hood latch assembly using the OEM bolts (See Photo 4, below).





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Core Support Modification (1961-64 Models Only)

1. Locate the core support hardline register template, and install it under the passenger side fender using the OEM hardware removed during engine compartment disassembly (See Photos 3 and 4, Page 5, and Photo 1, below).
2. Using the 1/4" hole on the template, mark the center of the hole to be drilled (See Photo 1, below).
3. Remove the template and drill a 7/8" hole from the engine side of the core support (See Photo 2, below).
4. Use a file to deburr the 7/8" hole.

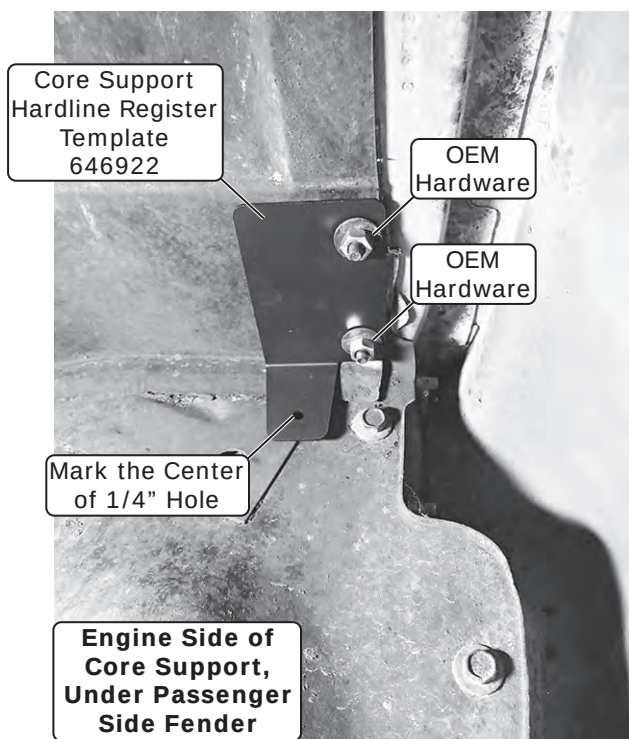


Photo 1

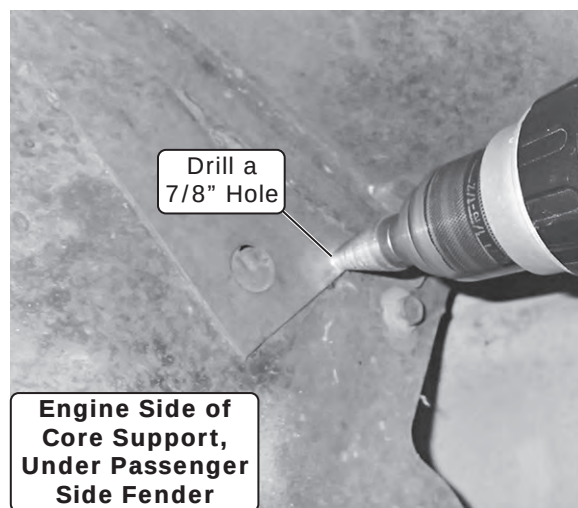


Photo 2

Core Support Modification (1965 Models Only)

1. Locate the 3/4" hole on the core support behind the passenger side headlight. Remove the grommet (if applicable) and enlarge the hole to 7/8" (See Photo 1, below).
2. Use a file to deburr the 7/8" hole.

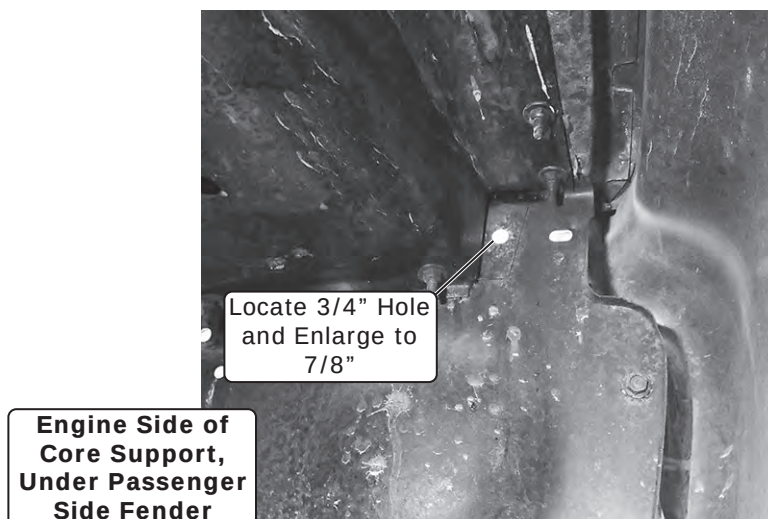


Photo 1



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Drier and Binary Switch Installation

NOTE: Do not remove the caps from the drier. The drier contains a desiccant that will quickly absorb moisture from the air, causing it to lose effectiveness. For this reason, Vintage Air recommends that the drier remains capped until the installer is ready to evacuate the system.

Perform the following:

1. On a workbench, lubricate the binary switch O-ring and install the binary switch onto the drier (See Photo 1, below).
2. Install the drier into the drier bracket assembly (See Photos 1 and 2, below). **NOTE: Refrigerant flow through drier is IN from condenser, OUT to evaporator.**
3. Secure the drier into the drier bracket assembly using a 1/4" flat washer and 1/4-20 nut with star washer (See Photo 2 and Figure 1, below). **NOTE: Do not fully tighten hardware until the #6 condenser/drier hardline has been installed.**
4. Loosen the IN drier cap just enough to allow for hand removal after drier bracket installation (See Photo 2, below).

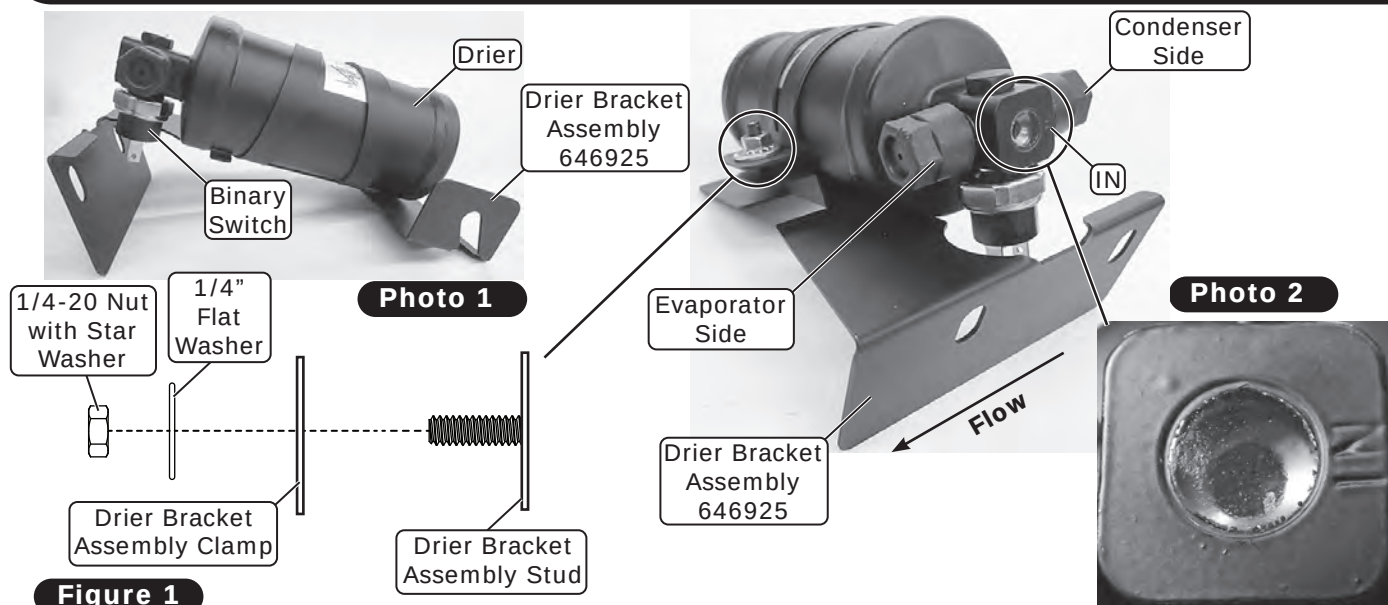


Figure 1

Drier Assembly Installation

1. Using (1) OEM bolt, attach the drier bracket assembly to the engine side of the core support under the passenger side fender (See Photo 1, below).
2. Using (2) OEM bolts, (2) OEM washers and (2) OEM nuts, secure the top side of the drier bracket assembly (See Photo 2, below). **NOTE: Do not fully tighten hardware until the #6 condenser/drier hardline has been installed.**

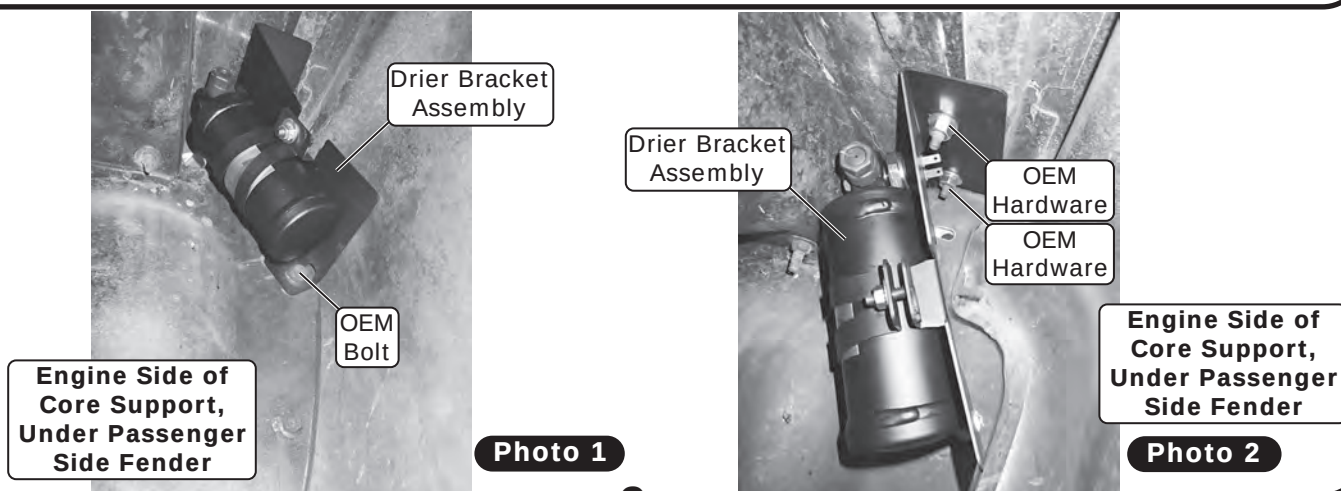


Photo 1

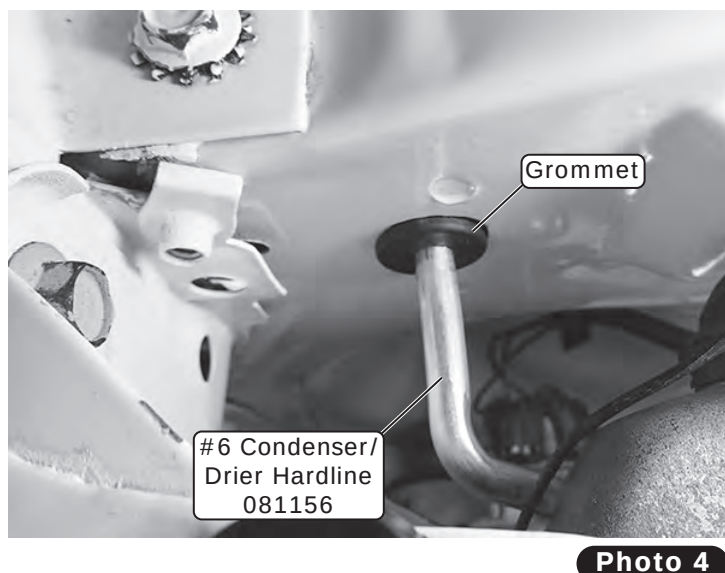
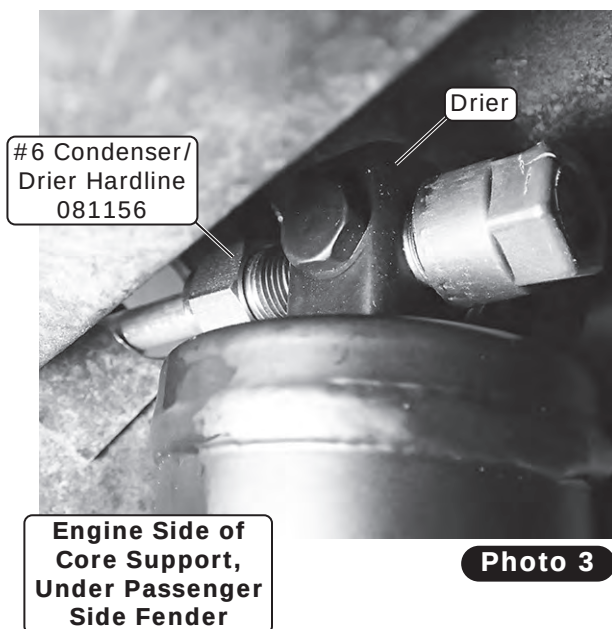
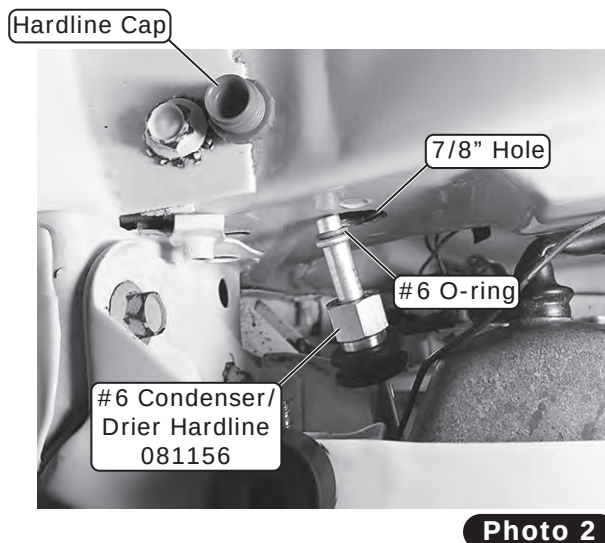
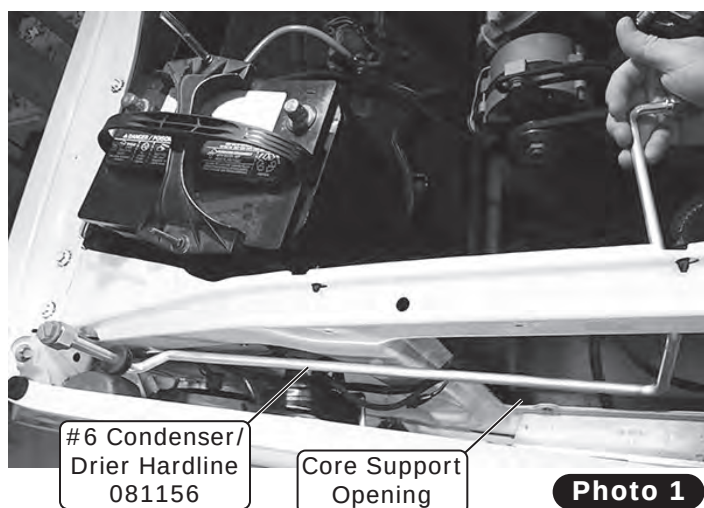
Photo 2



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#6 Hardline Installation

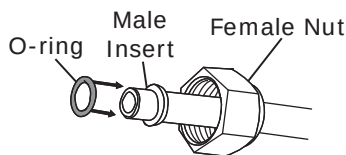
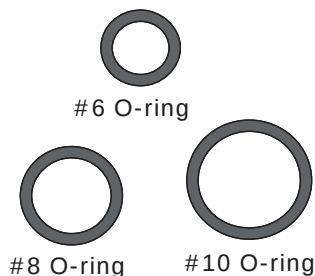
1. Carefully insert the #6 condenser/drier hardline through the engine side of the core support opening (See Photo 1, below).
2. Remove the hardline cap. Lubricate a #6 O-ring and install it onto the #6 condenser/drier hardline as shown in Photo 2, below, and Figure 1, Page 11. Insert the end of the hardline through the 7/8" hole on the core support (See Photo 2, below).
3. Remove the drier cap and install the #6 condenser/drier hardline onto the drier using the 3/4" wrench provided (See Photo 3, below). **NOTE: Do not fully tighten hardline until the other end of the hardline has been installed onto the condenser.**
4. Insert the hardline grommet into the 7/8" core support hole (See Photo 4, below).





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Lubricating O-rings



Refrigerant Oil
for O-rings

O-ring installs
over male insert
to swaged lip

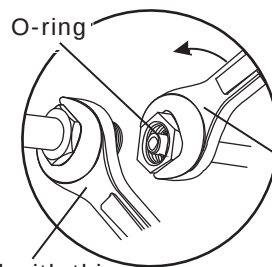
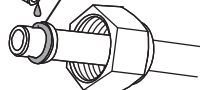


Figure 1

Twist with
this wrench

Hold with this
wrench

NOTE: Standard torque specifications:

#6: 11 to 13 ft.-lb.

#8: 15 to 20 ft.-lb.

#10: 21 to 27 ft.-lb.

#6 Hardline Support Bracket Installation (1961-64 Models Only)

1. On the engine side of the grille, remove the 2nd bolt on the passenger side next to the hood latch (See Photo 1, below).
2. Install the #6 hardline support bracket, and secure it using the OEM bolt removed in Step 1, above (See Photo 2, below). **NOTE: Secure the hardline support bracket using the 2nd hole on the bracket (See Photo 3, below).**

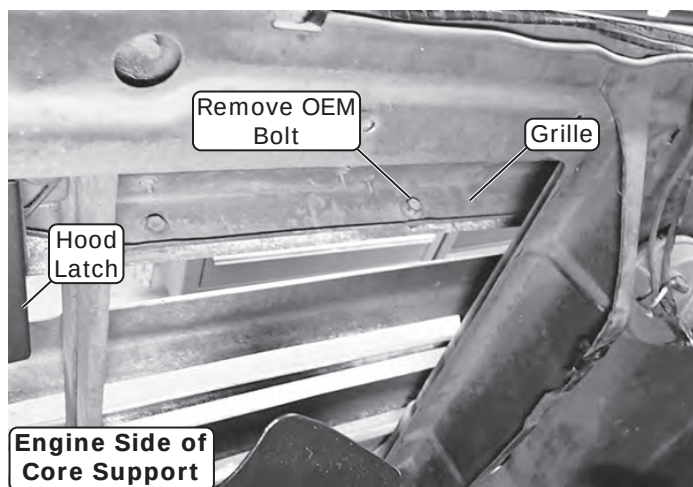


Photo 1

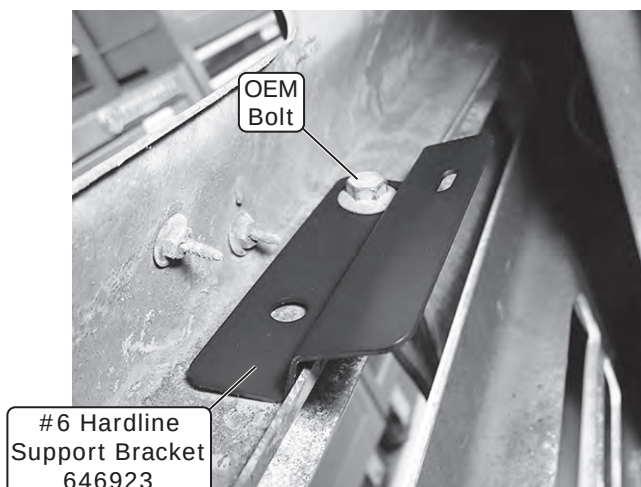


Photo 2

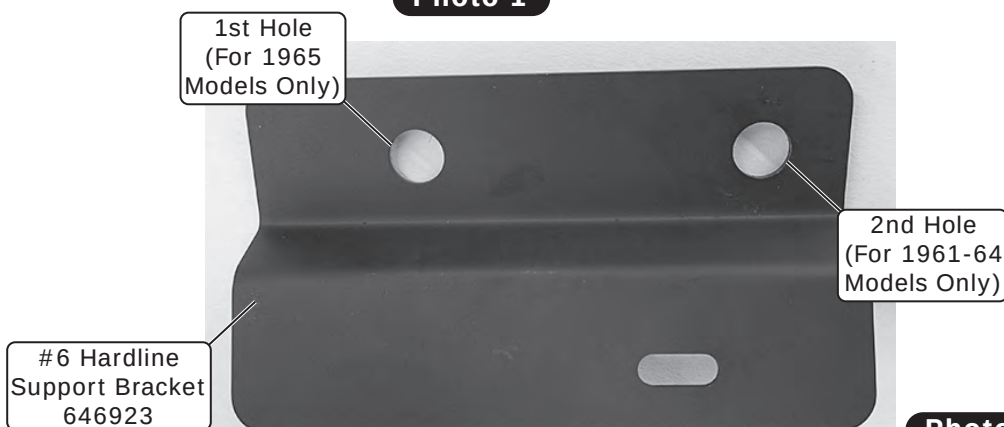


Photo 3



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#6 Hardline Support Bracket Installation (1965 Models Only)

1. On the engine side of the grille, remove the 1st bolt on the passenger side next to the hood latch (See Photo 1, below).
2. Install the #6 hardline support bracket, and secure it using the OEM bolt removed in Step 1, above (See Photo 2, below). **NOTE: Secure the hardline support bracket using the 1st hole on the bracket (See Photo 3, Page 11).**

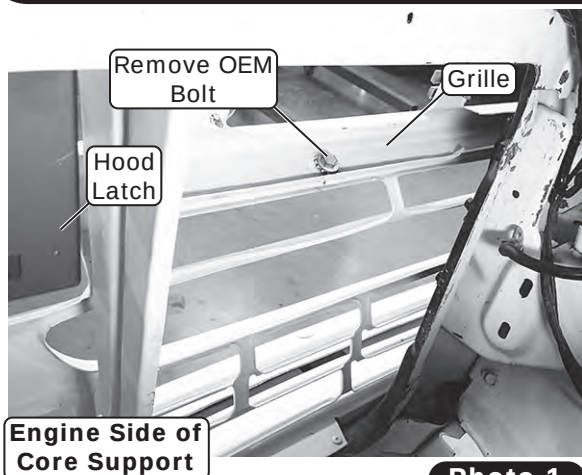


Photo 1

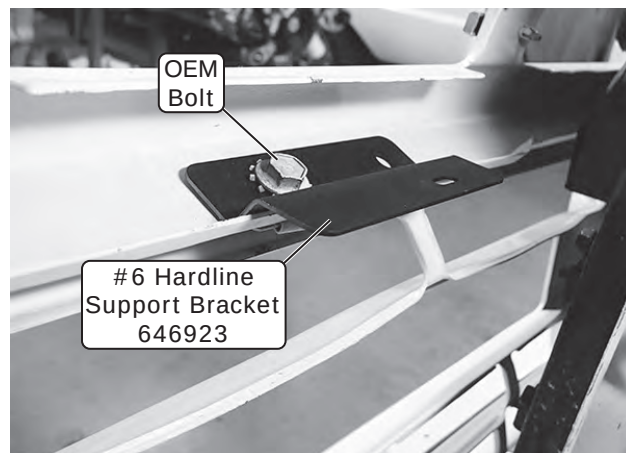


Photo 2

Condenser Mounting Bracket Installation

1. On a workbench, install the condenser top bracket onto the back of the condenser using (4) 10-24 x 3/8" pan head screws and (4) 10-24 nuts with star washers (See Figure 1, below). **NOTE: The condenser top bracket mounts to the outside of the flange through the 3rd and 5th holes from the left and the 6th and 8th holes from the right.**
2. Install the condenser driver side bracket onto the front of the condenser using (2) 10-24 x 3/8" pan head screws and (2) 10-24 nuts with star washers (See Figure 2, below). **NOTE: The condenser driver side bracket mounts to the outside of the flange through the 1st and 3rd holes from the right.**
3. Install the condenser passenger side bracket onto the front of the condenser using (2) 10-24 x 3/8" pan head screws and (2) 10-24 nuts with star washers (See Figure 2, below). **NOTE: The condenser passenger side bracket mounts to the outside of the flange through the 1st and 3rd holes from the left.**

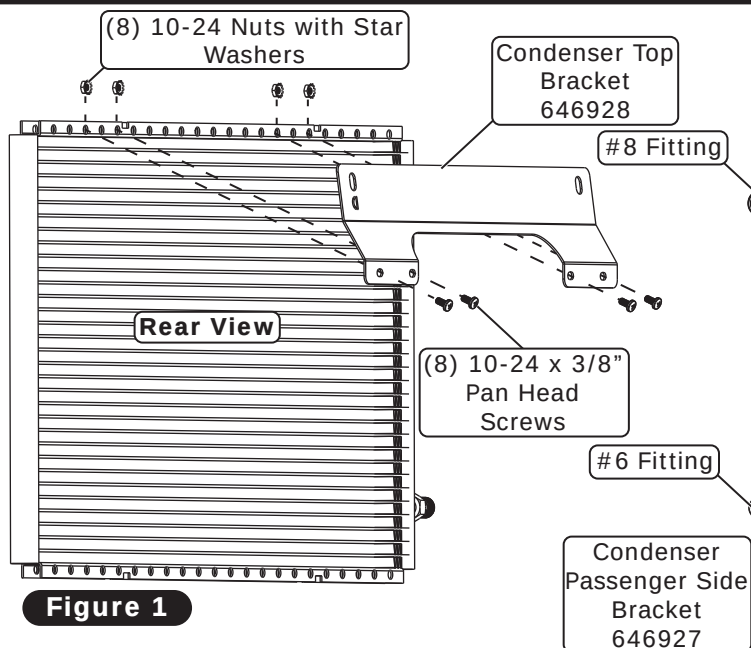


Figure 1

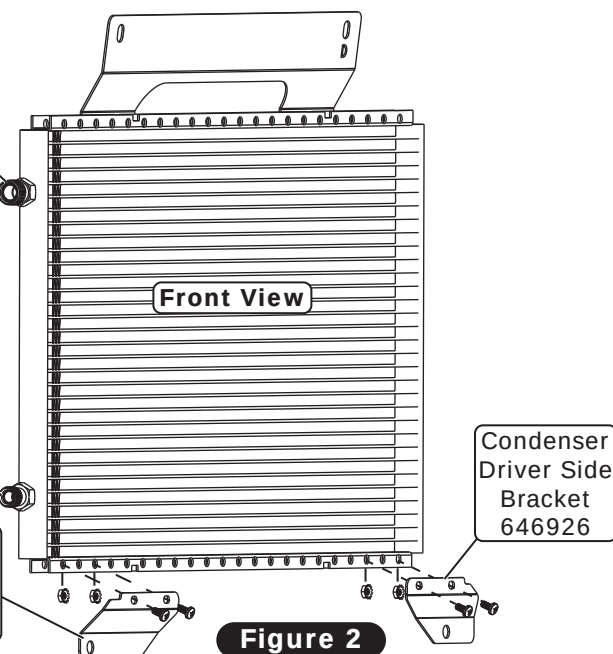


Figure 2



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Condenser Assembly and Hardline Installation

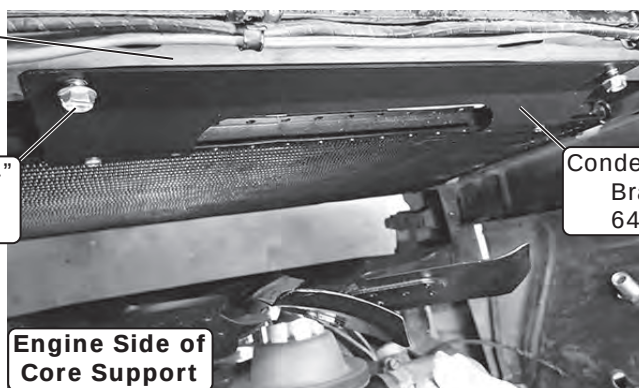
1. Secure the condenser top bracket into OEM holes on the engine side of the core support using (2) 5/16-18 x 3/4" self-tapping screws (See Photos 1 and 2, below).
2. Secure the condenser driver and passenger side brackets to the front side of the core support using (2) 1/4-20 x 3/4" hex bolts, (4) 1/4" flat washers and (2) 1/4-20 nuts with star washers (See Photos 3 and 4, and Figure 1, below). **NOTE: The condenser top, driver and passenger side brackets are slotted for adjustment. When installing, ensure that the holes on the core support are aligned with the condenser bracket holes. Adjust the brackets up, down and sideways as necessary.**
3. Lubricate and install a #6 O-ring onto the #6 condenser/drier hardline (See Figure 1, Page 11). Install the #6 condenser/drier hardline onto the #6 condenser fitting (See Photo 5, below).
4. Secure and tighten both ends of the #6 condenser/drier hardline (See Figure 1, Page 11). Tighten all hardware on the drier bracket assembly and all of the condenser brackets at this time.



Condenser Assembly

Core Support

(2) 5/16-18 x 3/4" Self-Tapping Screws

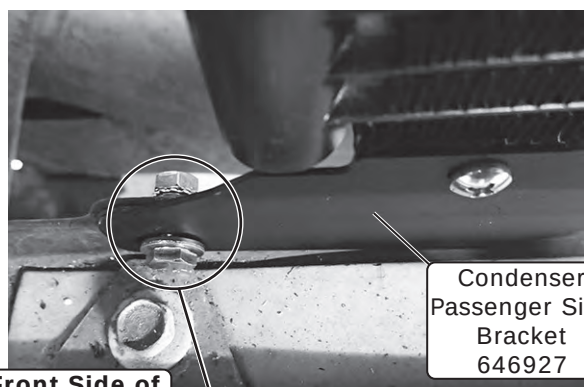


Engine Side of Core Support

Condenser Top Bracket 646928

Photo 1

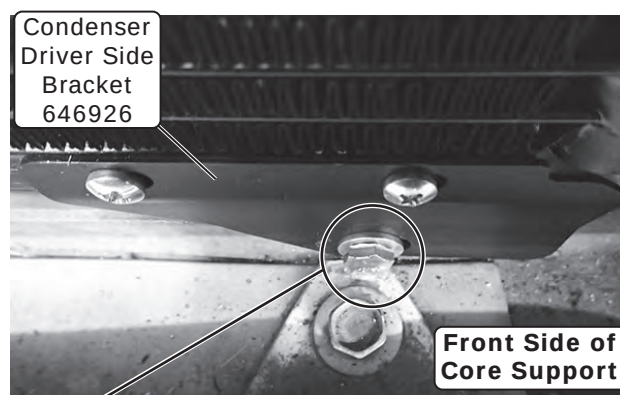
Photo 2



Front Side of Core Support

Condenser Passenger Side Bracket 646927

Photo 3



Condenser Driver Side Bracket 646926

Front Side of Core Support

Photo 4

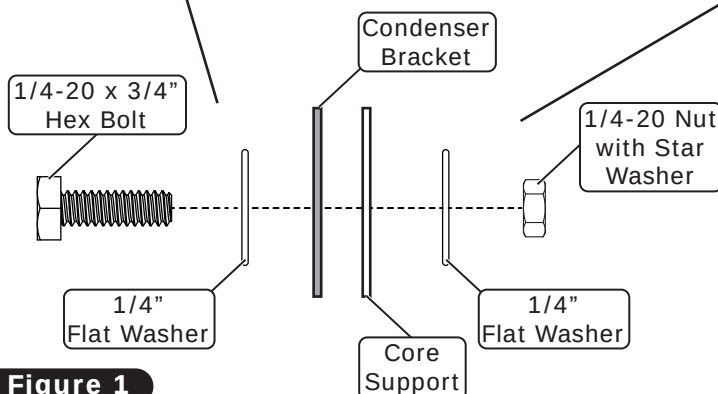
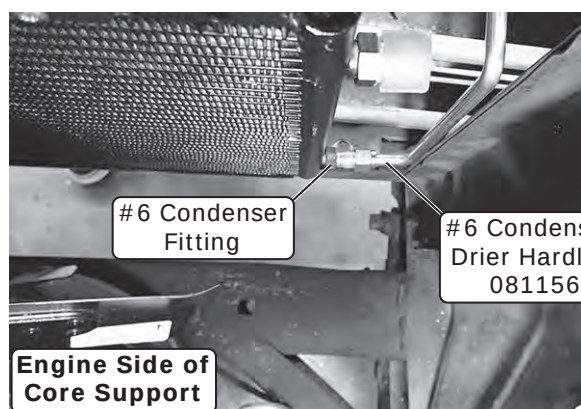


Figure 1



Engine Side of Core Support

#6 Condenser Fitting

#6 Condenser/Drier Hardline 081156

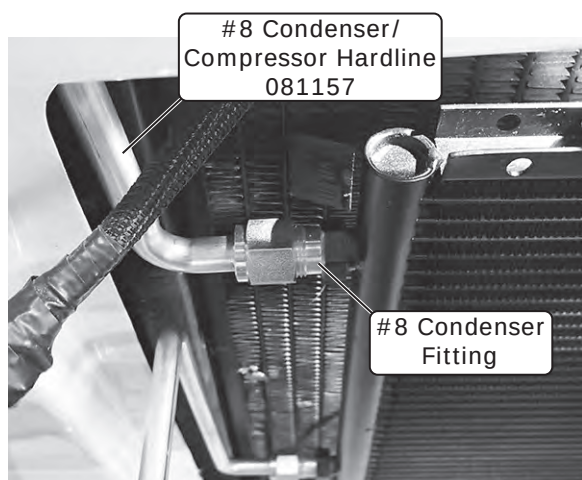
Photo 5



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Condenser Assembly and Hardline Installation (Cont.)

5. Insert the radiator from the top of the core support. **NOTE: Do not secure the radiator at this time.**
6. Lubricate and install a #8 O-ring onto the #8 condenser/compressor hardline (See Figure 1, Page 11). Install the #8 condenser/compressor hardline onto the #8 condenser fitting (See Photo 6, below, and Figure 1, Page 11).
7. Install the #8 hardline support bracket onto the engine side of the core support next to the condenser top bracket and secure it into an OEM hole using a 5/16-18 x 3/4" self-tapping screw (See Photo 7, below).
8. Secure the #8 condenser/compressor hardline to the #8 hardline support bracket using a 1/2" Adel clamp, a 10-24 x 3/8" pan head screw and a 10-24 nut with star washer (See Photo 7, and Figure 2, below). **NOTE: It is important to have enough clearance around the condenser and the hardlines. Make sure the condenser is not hitting the support braces between the grille and the condenser. If the condenser is hitting the support braces, loosen the bottom bolts of the support braces and move the bolts toward the front as much as possible. Make sure the hardlines are not hitting any other places on the core support (See Photo 8, below).**



Front Side of Core Support

Photo 6

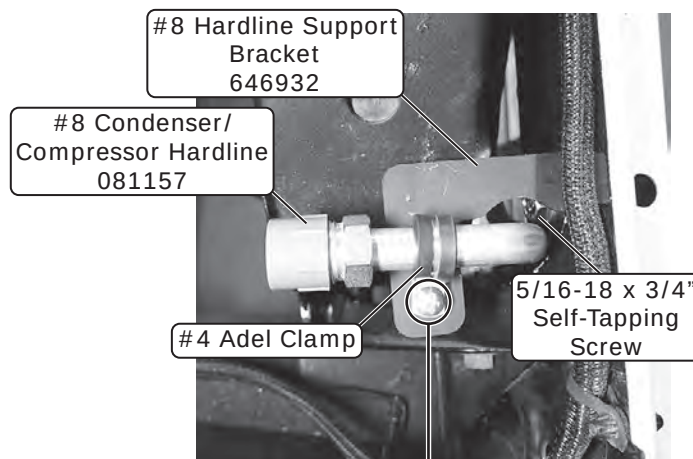


Photo 7



Support Brace

Support Brace Bolt

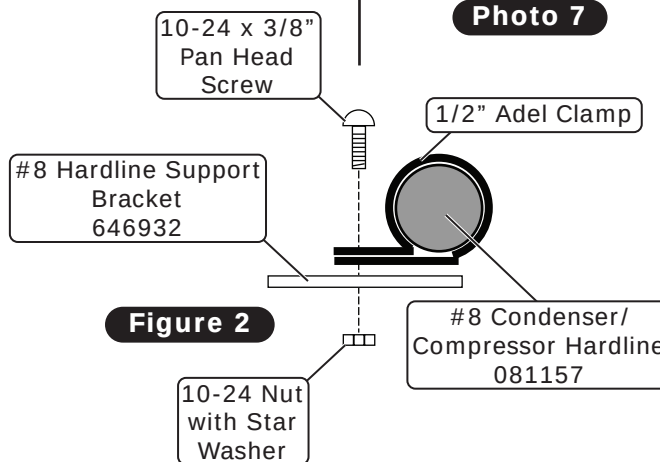


Figure 2

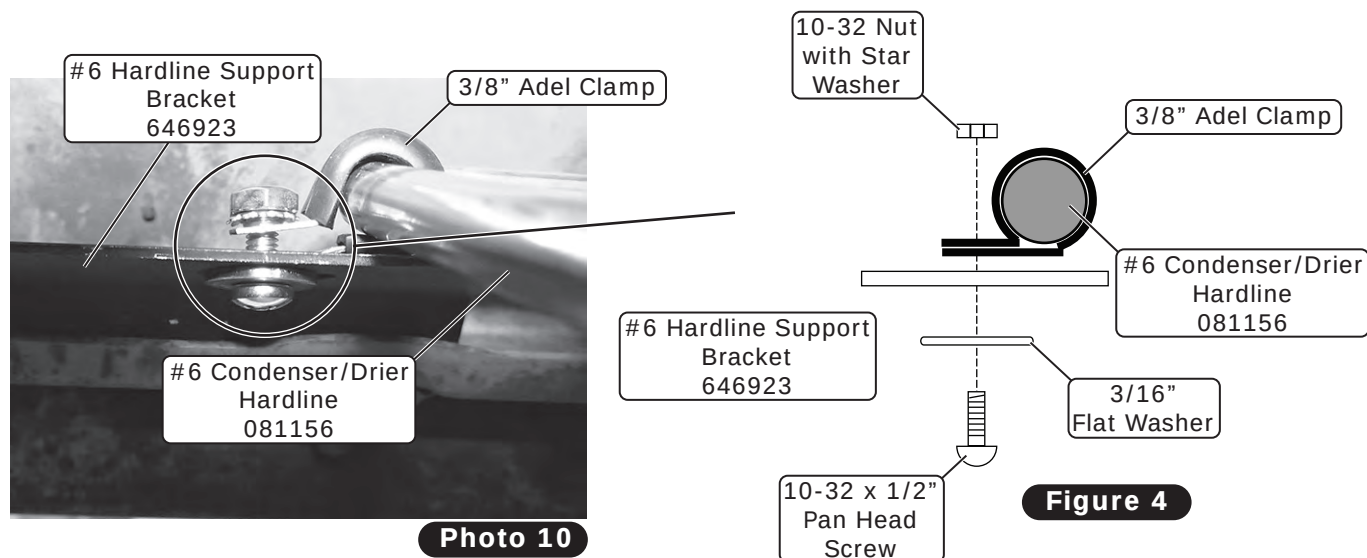
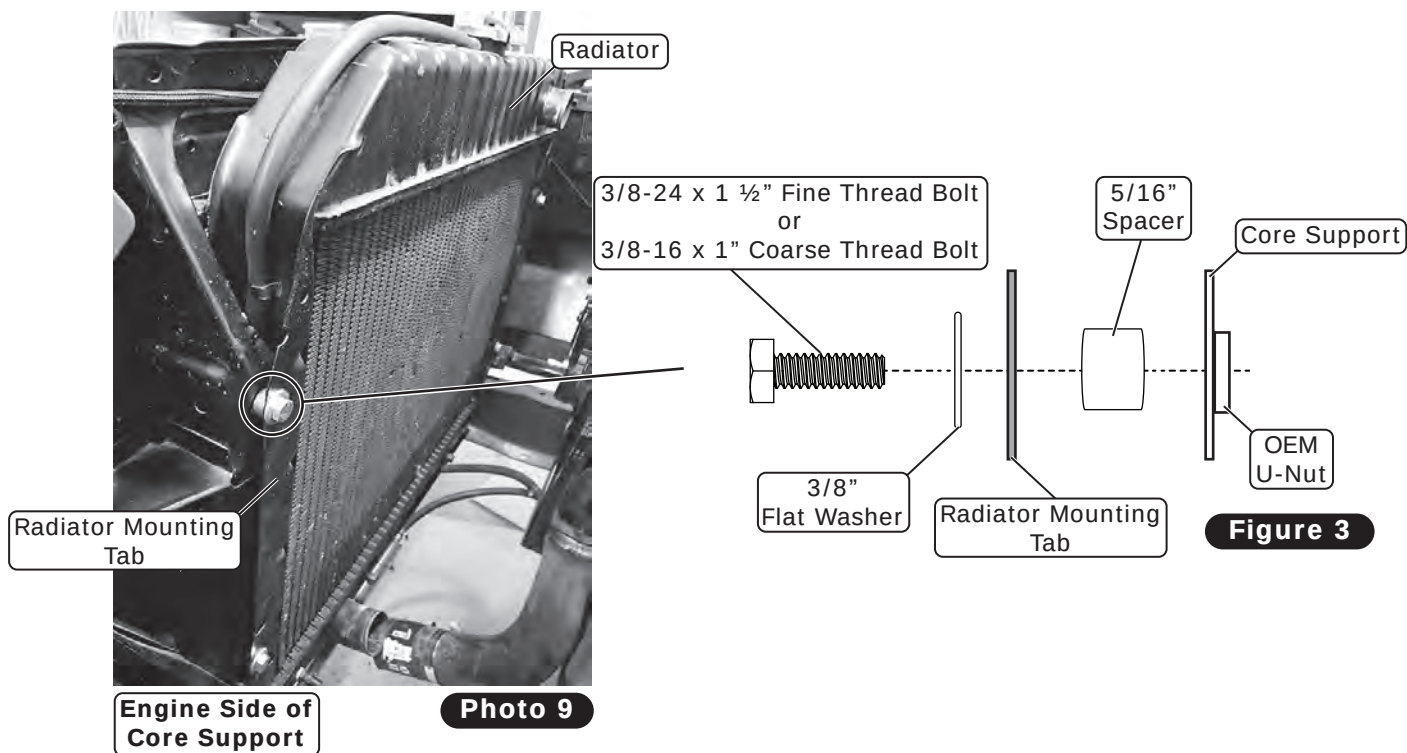
Photo 8



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Condenser Assembly and Hardline Installation (Final)

9. Secure the radiator to the core support using (4) 3/8" bolts*, (4) 5/16" spacers and (4) 3/8" flat washers (See Photo 9 and Figure 3, below). ***NOTE: 1961-64 models use (4) 3/8-24 x 1 1/2" fine thread bolts. 1965 models use (4) 3/8-16 x 1" coarse thread bolts.**
10. Install a 3/8" Adel clamp onto the #6 condenser/drier hardline and secure it to the #6 hardline support bracket using a 10-32 x 1/2" pan head screw, a 3/16" flat washer and a 10-32 nut with star washer (See Photo 10, and Figure 4, below).
11. Reinstall and/or reconnect all remaining items removed or disconnected in the Engine Compartment Disassembly instructions on Page 5. This concludes the condenser kit portion of your installation.





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Packing List: Condenser Kit (011150)

O-rings/Refrigerant Oil

	Qty		Part No	Description
	1	☐	11079-VUS	Binary Switch, Male
	4	☐	180034	Spacer, .313 Length
	4	☐	18029-VUB	Washer, 3/8", Flat
	4	☐	18042-VUB	Bolt, 3/8-24 x 1 1/2", Hex
	1	☐	18123-VUB	Washer, 3/16" x 1/2", SAE Flat
	5	☐	18125-VUB	Washer, 1/4", USS, Flat
	2	☐	181490	Locknut, 1/4-20
	3	☐	18152-VUB	Nut with Star Washer, 1/4-20
	3	☐	182360	Screw, 5/16-18 x 3/4", Self-Tapping
	1	☐	18247-VUB	Screw, #10 x 1/2", Sheet Metal
	9	☐	18249-VUB	Screw, 10-24 x 3/8", Pan Head
	1	☐	18250-VUB	Screw, 10-32 x 1/2"
	1	☐	18251-VUB	Nut with Star Washer, 10-32
	9	☐	18260-VUB	Nut with Star Washer, 10-24
	2	☐	182871	Bolt, 1/4-20 x 3/4", Hex
	4	☐	18359-VUB	Bolt, 3/8-16 x 1", Hex
	2	☐	183814	Bolt, 1/4-20 x 5/16", Shoulder
	2	☐	18544-WNS	Washer, 5/16", AN Flat
	1	☐	23135-VUW	Compressor Lead
	1	☐	31600-VUD	Adel Clamp, 3/8" I.D.
	1	☐	31603-VUD	Adel Clamp, 1/2" I.D.

Packed By: _____

	Qty		Part No	Description
	4	☐	33857-VUF	O-ring, #6
	3	☐	33858-VUF	O-ring, #8
	1	☐	41117-VUP	Refrigerant Oil

Packed By: _____

Brackets

	Qty		Part No	Description
	1	☐	646917	Wrench
	1	☐	646922	Template, CS Hardline Register (1961-64 Models)
	1	☐	646923	Bracket, #6 Hardline Support
	1	☐	646925	Bracket, Drier
	1	☐	646926	Bracket, Condenser, Driver-Side
	1	☐	646927	Bracket, Condenser, Passenger-Side
	1	☐	646928	Bracket, Condenser, Top
	1	☐	646932	Bracket, #8 Hardline Support
	1	☐	646936	Bracket, Hood Latch Handle

Packed By: _____

Hardlines

	Qty		Part No	Description
	1	☐	081156	Hardline, #6 Condenser/Drier
	1	☐	081157	Hardline, #8 Condenser/Compressor

Packed By: _____

Condenser / Drier

	Qty		Part No	Description
	1	☐	03767-VUC	Condenser, 14" x 24", Parallel Flow
	1	☐	07321-VUC	Drier

Packed By: _____

Inspected By: _____

Date: _____

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