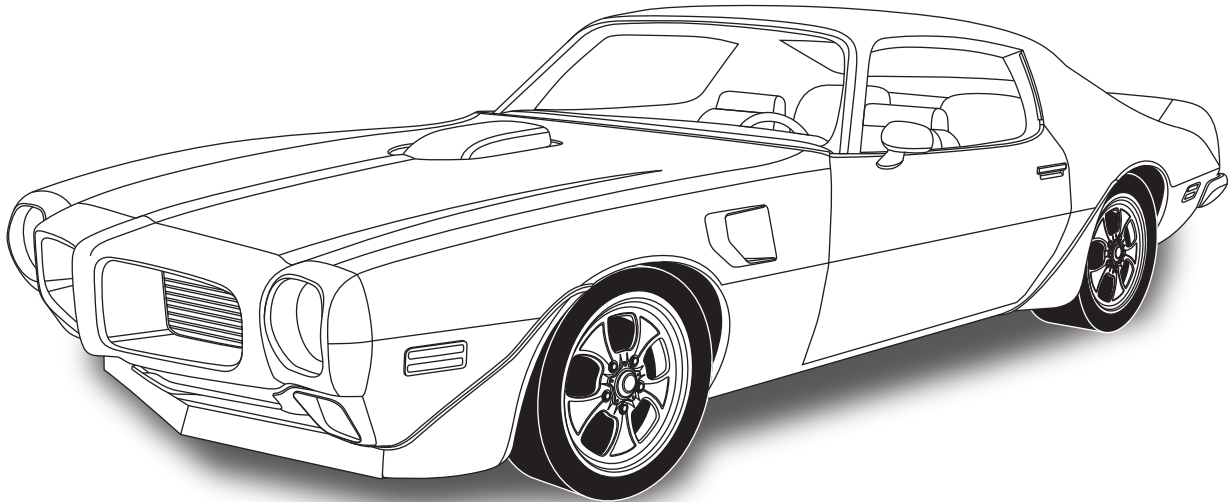




1970-81 Pontiac Firebird

**Condenser Kit *with* Drier
(021080)**



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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.



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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):

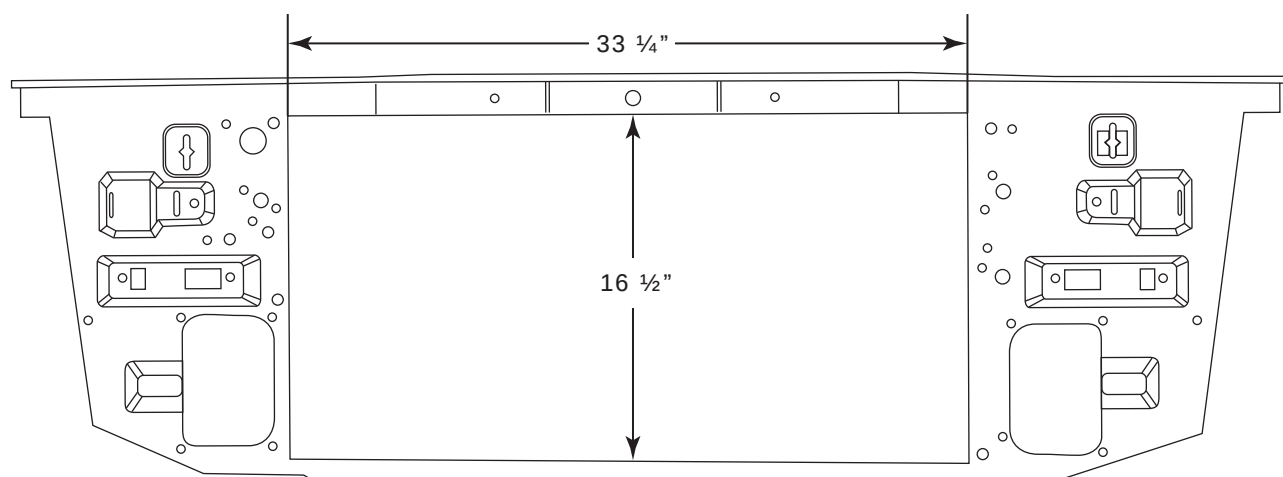
Heater hose may be purchased from Vintage Air (Part#31800-VUD) or your local parts retailer. Routing and required length will vary based on installer preference.



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Core Support Measurements

This kit was developed based on the measurements below, which were taken from a 1976 Pontiac Firebird with factory air.





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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.

Perform the following:

1. Disconnect the battery.
2. Drain the radiator.
3. Remove the OEM fan shroud (retain) and fan (retain).
4. Remove the (4) radiator mounting pads (See Photo 1, below) (retain) and the radiator (retain).
5. Remove the OEM condenser assembly, A/C muffler, hoses, hardlines and drier (See Photo 2, below) (discard).
6. Remove the OEM rubber grommet from passenger side of core support (See Photo 3, below) (discard).

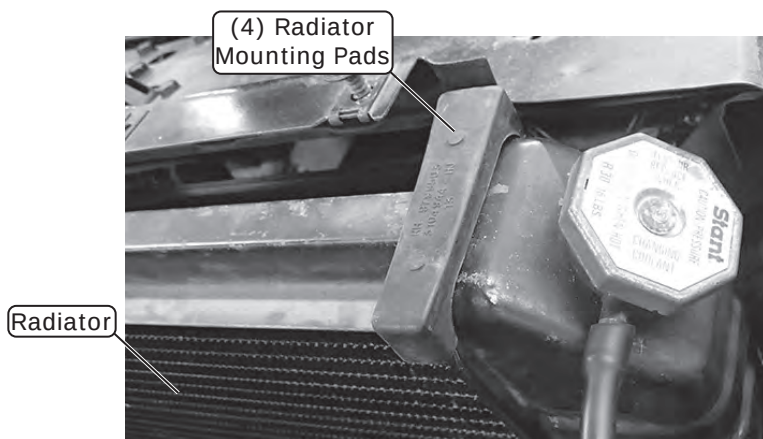


Photo 1

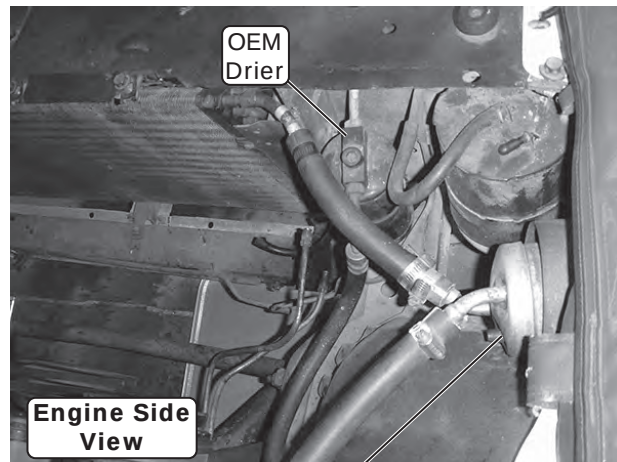


Photo 2

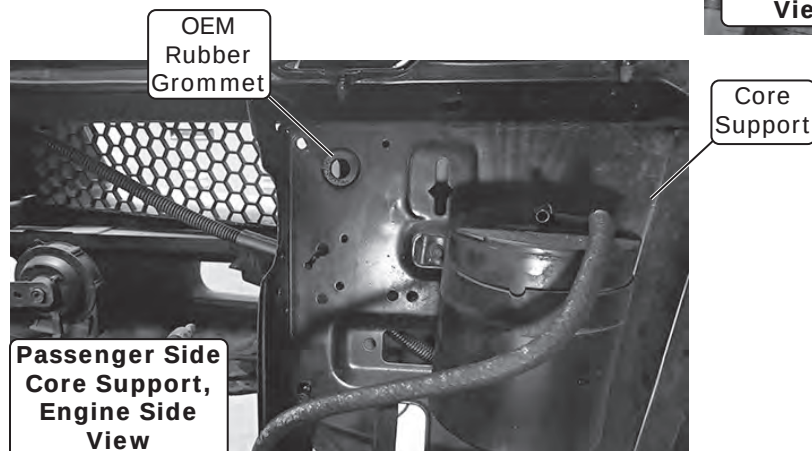


Photo 3



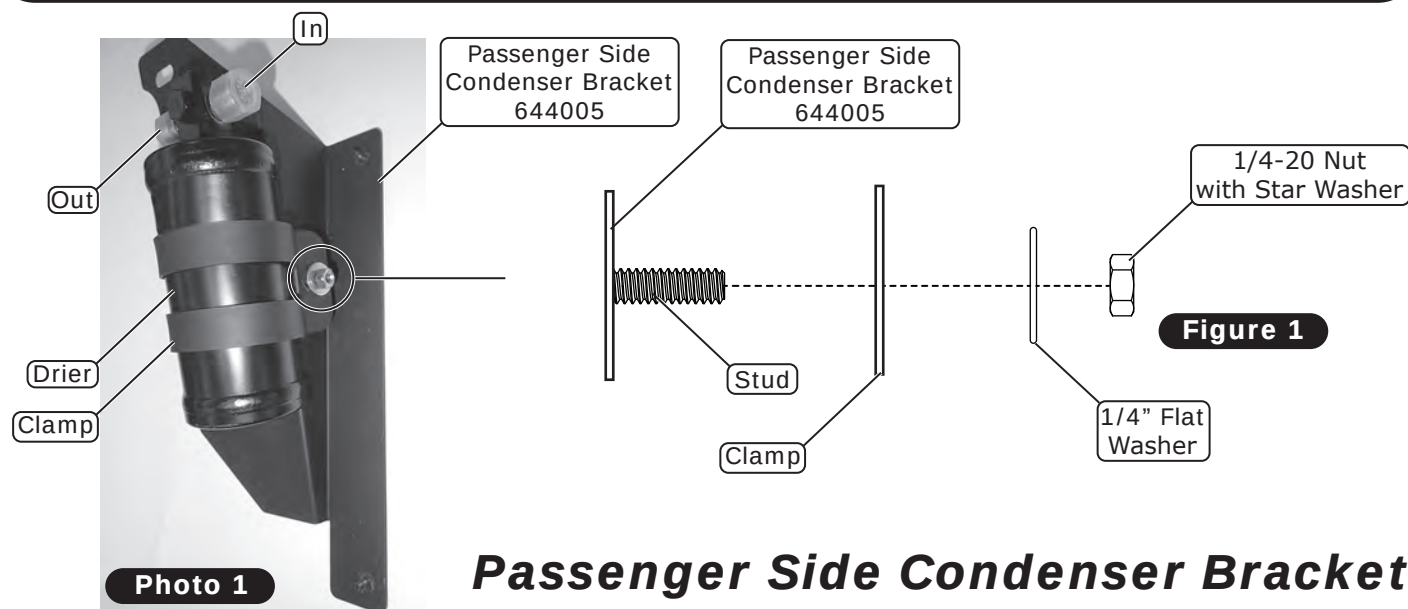
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Drier Installation

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.

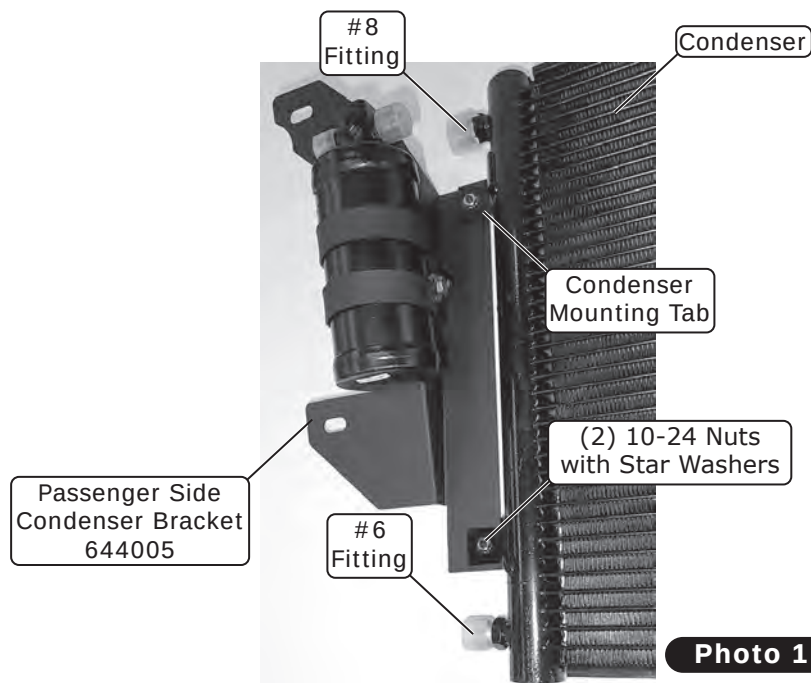
Perform the following:

1. On a workbench, install the drier into the passenger side condenser bracket clamp (See Photo 1, below).
NOTE: Refrigerant flow through drier is IN from condenser, OUT to evaporator.
2. Secure the drier into the passenger side condenser bracket using a 1/4" flat washer and 1/4-20 nut with star washer (See Photo 1 and Figure 1, below). **NOTE: Do not fully tighten hardware until the #6 condenser/drier hardline has been installed (See Page 7).**



Passenger Side Condenser Bracket Installation

1. On a workbench, secure the passenger side condenser bracket onto the condenser mounting tabs using (2) 10-24 nuts with star washers (See Photo 1, below).





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#6 Condenser / Drier Hardline Installation

1. Lubricate (2) #6 O-rings, and install (1) onto each end of the #6 condenser/drier hardline as shown in Figure 1, below.
2. Install the #6 condenser/drier hardline onto the #6 condenser fitting, and then onto the drier (See Photo 1, below). Once the #6 condenser/drier hardline has been installed, tighten the hardware on the passenger side condenser bracket clamp. **NOTE: Hold the drier firmly while tightening the passenger side condenser bracket clamp to prevent the drier from rotating.**

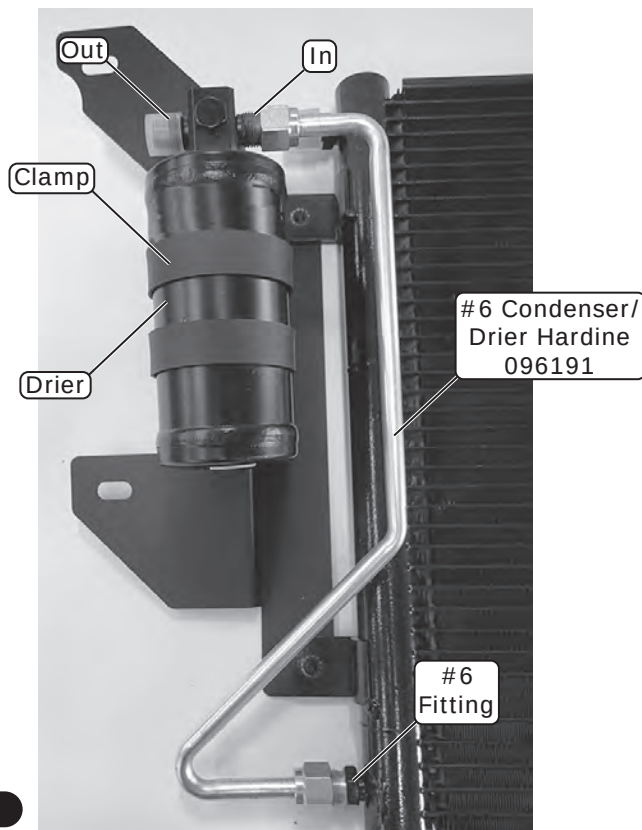
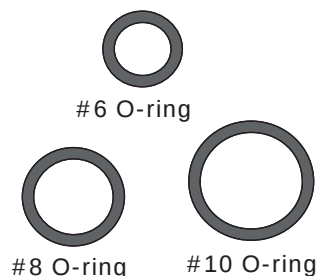


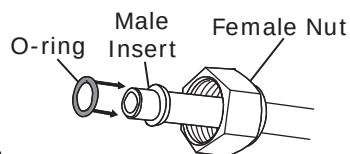
Photo 1

Lubricating O-rings



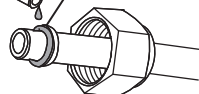
NOTE: Standard torque specifications:

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



Refrigerant Oil
for O-rings

O-ring installs
over male insert
to swaged lip



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

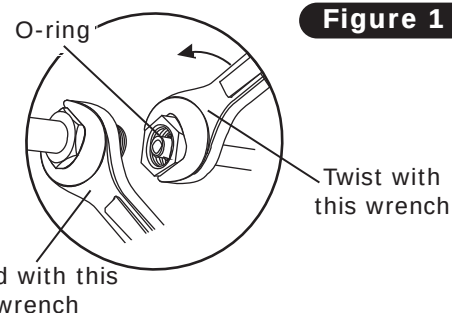


Figure 1



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Driver-Side Condenser Bracket Installation

1. Loosely attach the driver side condenser bracket to the core support using (2) 5/16-18 x 1" hex bolts, (4) 5/16" flat washers and (2) 5/16-18 locknuts (See Photo 1 and Figure 1, below). **NOTE: Do not fully tighten until the #6 drier/core hardline has been installed (See Page 10).**

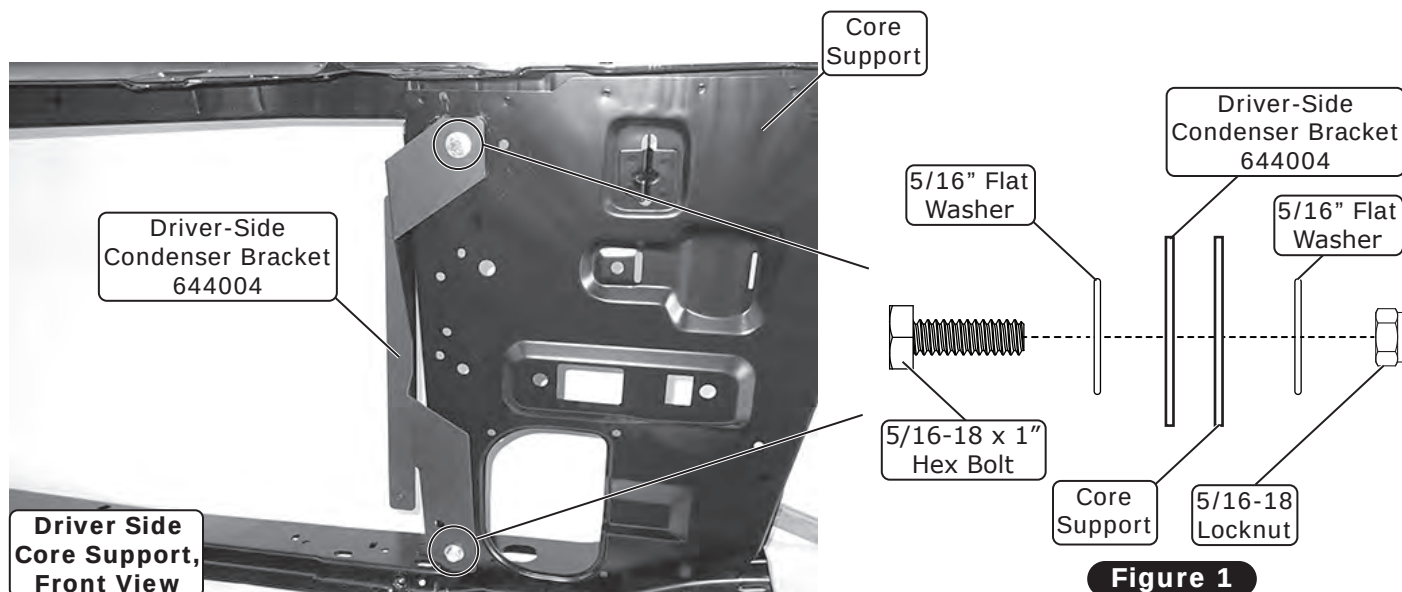


Figure 1

Photo 1

Condenser Installation

1. Install the rubber grommet into the core support hardline hole (See Photo 1, below).
2. Gently install the condenser assembly by tilting the passenger side condenser bracket with drier behind and through the core support (See Photo 1, below). **NOTE: Vintage Air recommends protecting the condenser surface to avoid damage during installation.**

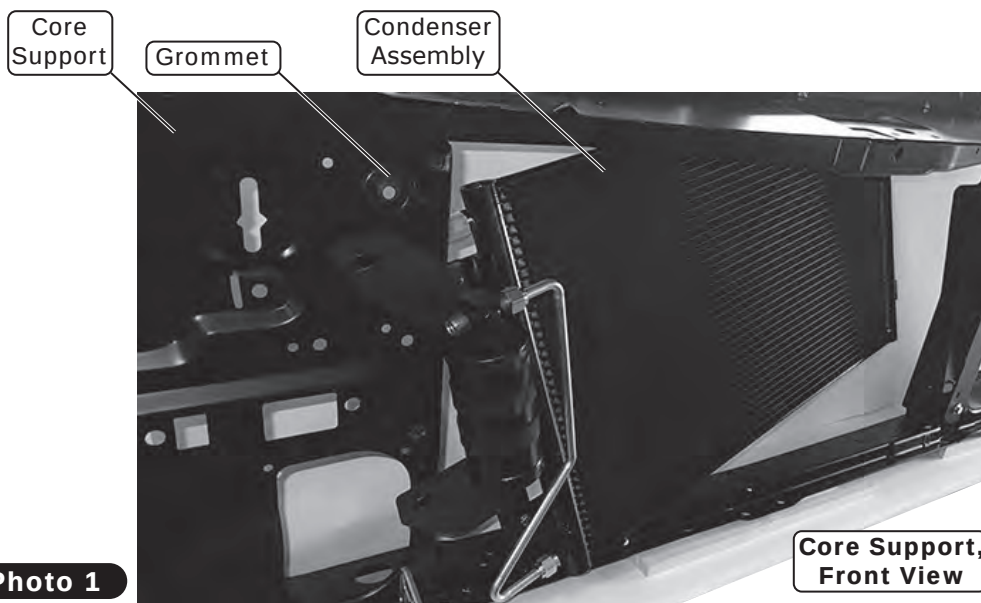


Photo 1



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Condenser Installation (Cont.)

- Using a 5/16-18 x 1" hex bolt, (2) 5/16" flat washers and a 5/16-18 locknut, loosely attach the top of the passenger-side condenser bracket to the front of the core support, and the hardline support bracket to the engine side of the core support, as shown in Photos 2 & 3, and Figure 1, below. **NOTE: Do not fully tighten until the #6 drier/core hardline has been installed (See Page 10).**
- Using a 5/16-18 x 1" hex bolt, (2) 5/16" flat washers and a 5/16-18 locknut, loosely attach the bottom of the passenger-side condenser bracket to the front of the core support as shown in Photo 2 and Figure 2, below. **NOTE: Do not fully tighten until the #6 drier/core hardline has been installed (See Page 10).**
- Attach the driver-side condenser bracket to the condenser assembly mounting tabs using (2) 10-24 nuts with star washers (See Photo 4, below).

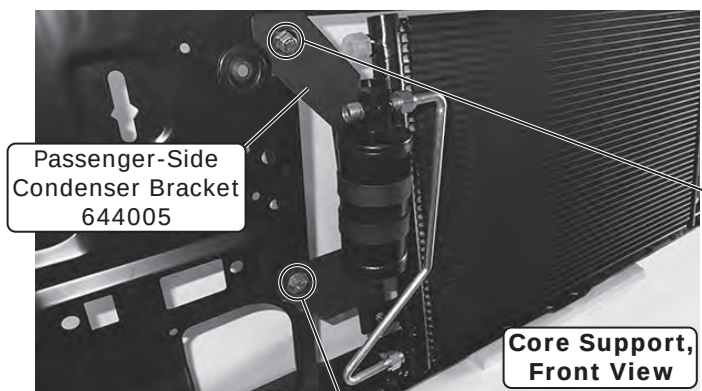


Photo 2

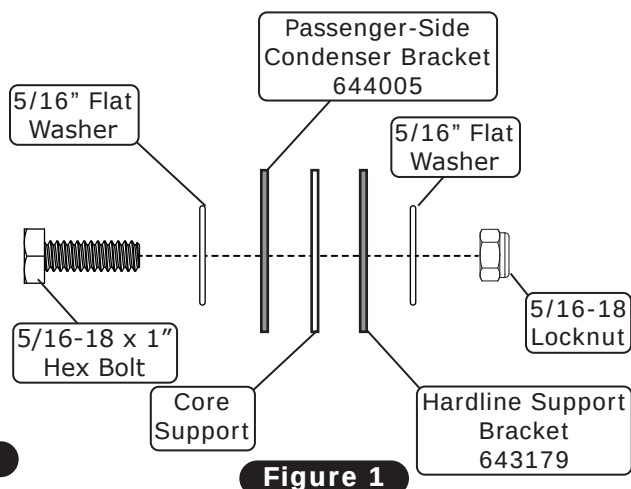


Figure 1

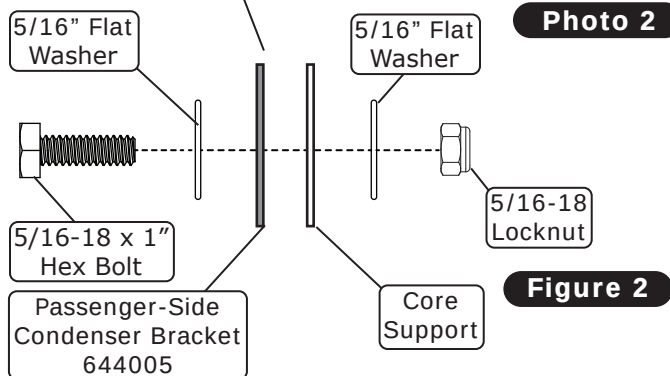


Figure 2

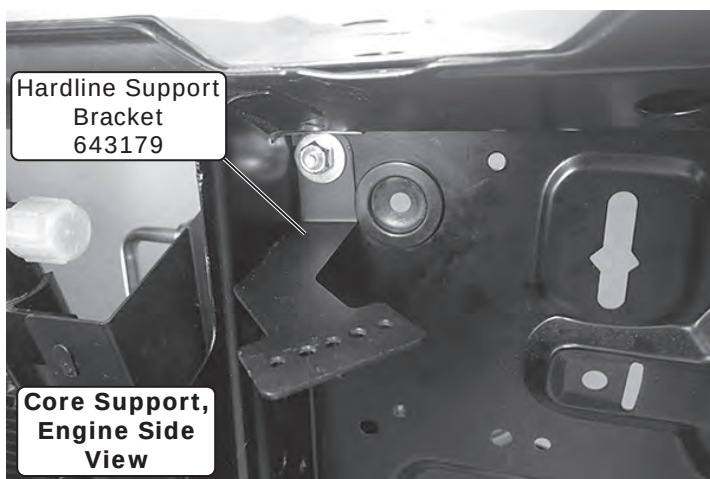


Photo 3

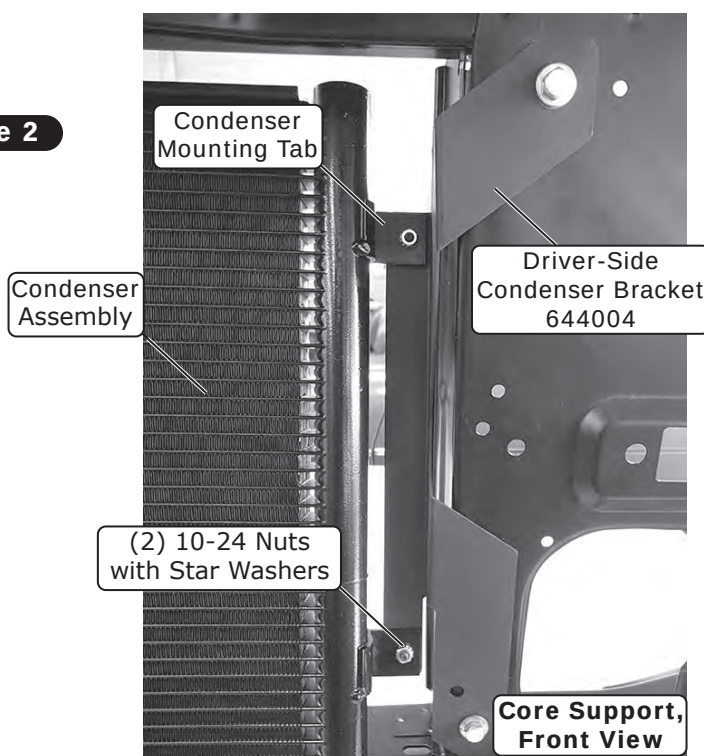


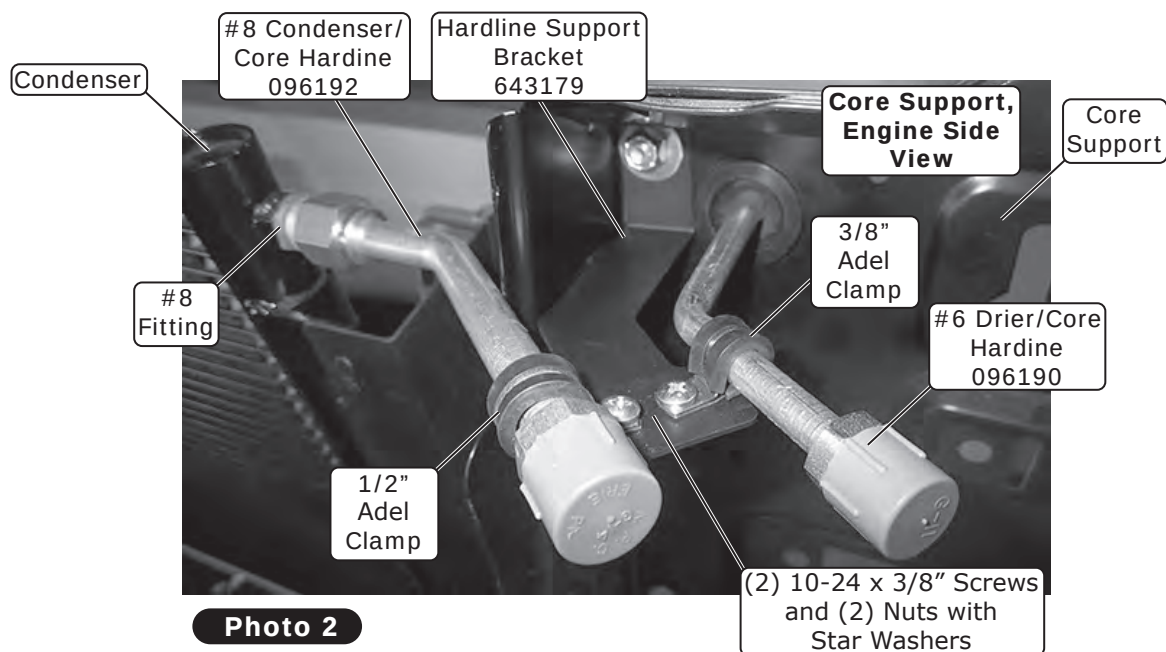
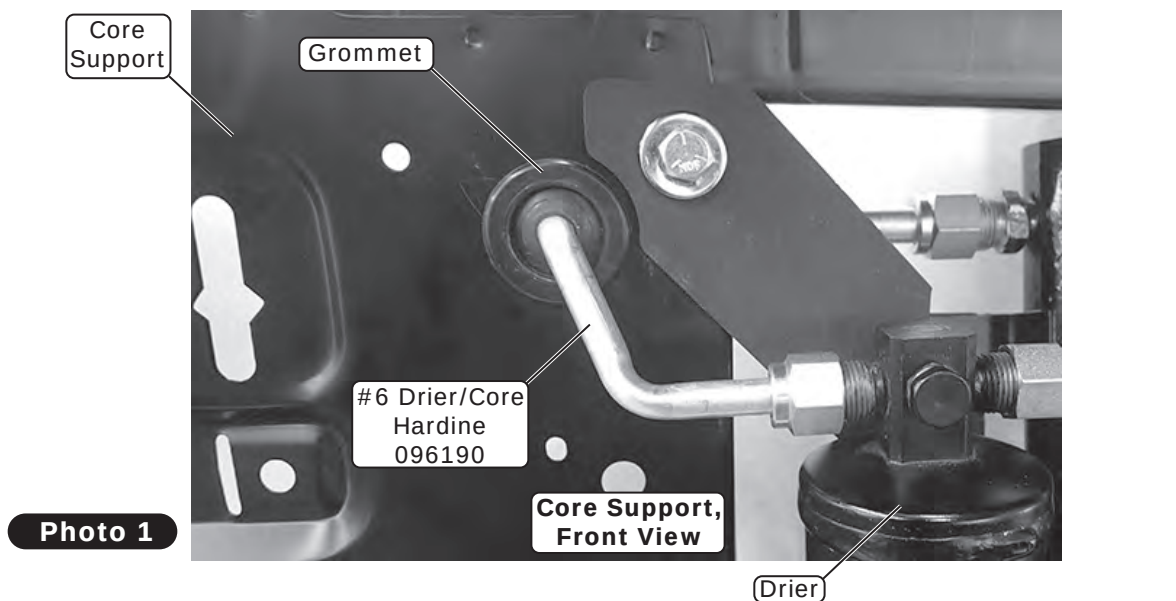
Photo 4



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#6 and #8 Hardline Installation

1. Lubricate a #6 O-ring, and install it onto the #6 drier/core hardline as shown in Figure 1, Page 7. Insert the #6 drier/core hardline through the rubber grommet, and install it onto the drier (See Photo 1, below). Center the #6 drier/core hardline in the rubber grommet hole, adjusting the condenser assembly. Once the #6 drier/core hardline is centered, tighten the hardware on both the passenger-side and driver-side condenser brackets.
2. Lubricate a #8 O-ring, and install it onto the #8 condenser/core hardline as shown in Figure 1, Page 7. Install the #8 condenser/core hardline onto the #8 condenser fitting (See Photo 2, below). **NOTE: Some models may require trimming of the core support for #8 condenser/core hardline clearance (See Page 11).**
3. Install a 3/8" Adel clamp over the #6 drier/core hardline, and a 1/2" Adel clamp over the #8 condenser/core hardline. Secure both to the hardline support bracket using (2) 10-24 x 3/8" screws and (2) 10-24 nuts with star washers (See Photo 2, below).

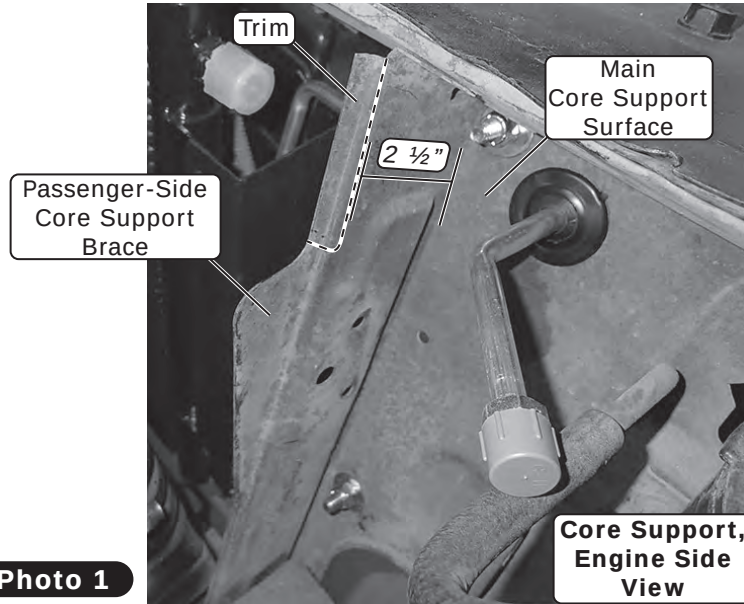




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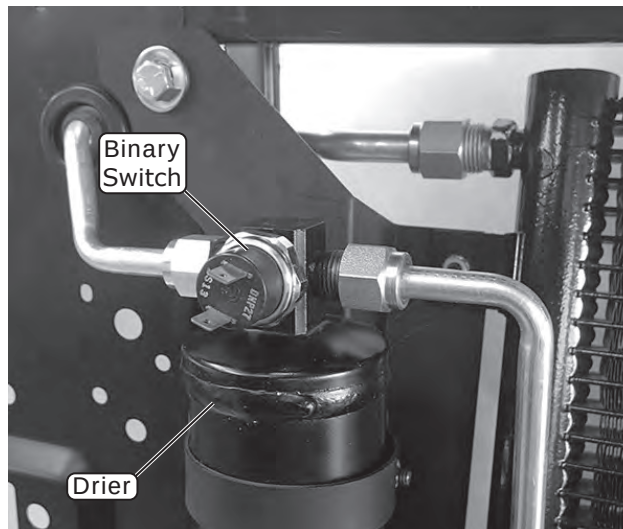
Hardline Core Support Modification (If Necessary)

1. On some models, the #8 condenser/core hardline may not have sufficient clearance around the passenger-side core support brace. In this case, measure 2 ½" from the main core support surface, and trim off the excess from the passenger side core support brace (See Photo 1, below).



Binary Switch Installation and Final Steps

1. Install the binary switch onto the drier as shown in Photo 1, below.
2. 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 (021080)

O-rings/Refrigerant Oil

	Qty		Part No	Description
	1	☐	11079-VUS	Binary Switch, Male
	1	☐	18125-VUB	Washer, 1/4" USS, Flat
	4	☐	18151-VUB	Locknut, 5/16-18
	1	☐	18152-VUB	Nut with Star Washer, 1/4-20, Hex
	2	☐	18249-VUB	Screw, 10-24 x 3/8", Pan Head
	6	☐	18260-VUB	Nut with Star Washer, 10-24
	4	☐	18308-VUB	Bolt, 5/16-18 x 1", Hex
	8	☐	18611-VUB	Washer, 5/16", Flat
	1	☐	23135-VUW	Compressor Lead
	1	☐	31600-VUD	Adel Clamp, 3/8" I.D.
	1	☐	31603-VUD	Adel Clamp, 1/2" I.D.
	1	☐	33135-VUI	Grommet, 1 1/4" with 3/8" Hole

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	☐	643179	Bracket, Hardline Support
	1	☐	644004	Bracket, Condenser, Driver-Side
	1	☐	644005	Bracket, Condenser, Passenger-Side

Packed By: _____

Hardlines

	Qty		Part No	Description
	1	☐	096190	Hardline, #6 Core/Drier
	1	☐	096191	Hardline, #6 Condenser/Drier
	1	☐	096192	Hardline, #8 Condenser/Core

Packed By: _____

Condenser / Drier

	Qty		Part No	Description
	1	☐	037030-OVR	Condenser, 16" x 28", 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.**