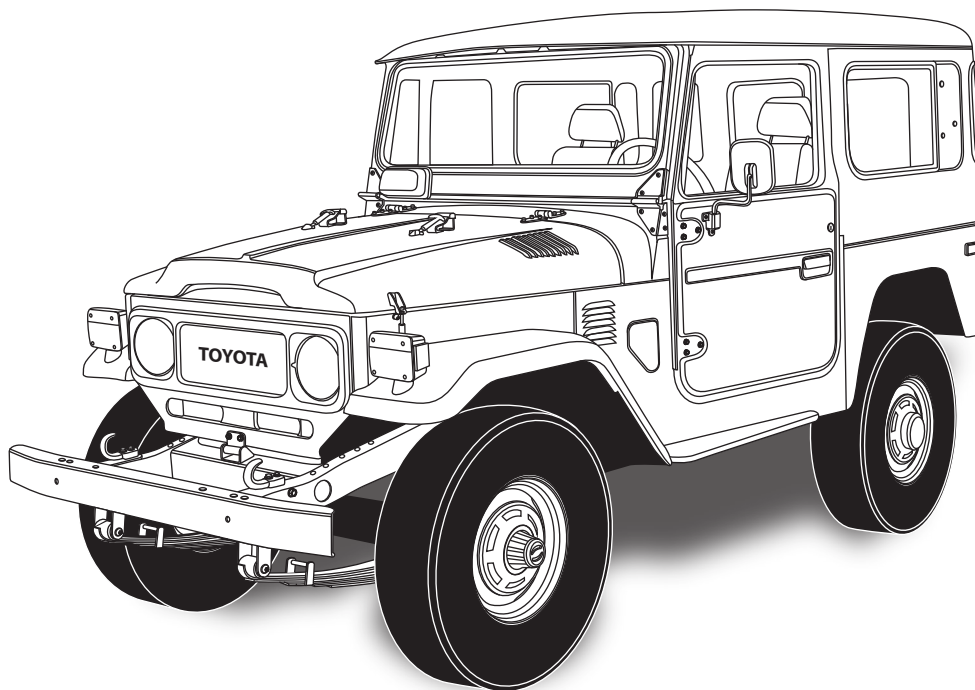




1968-83 Toyota FJ40

**Condenser Kit *with* Drier
(061200)**



18865 Goll St. San Antonio, TX 78266

Phone: 800-862-6658

Sales: sales@vintageair.com

Tech Support: tech@vintageair.com

www.vintageair.com



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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):

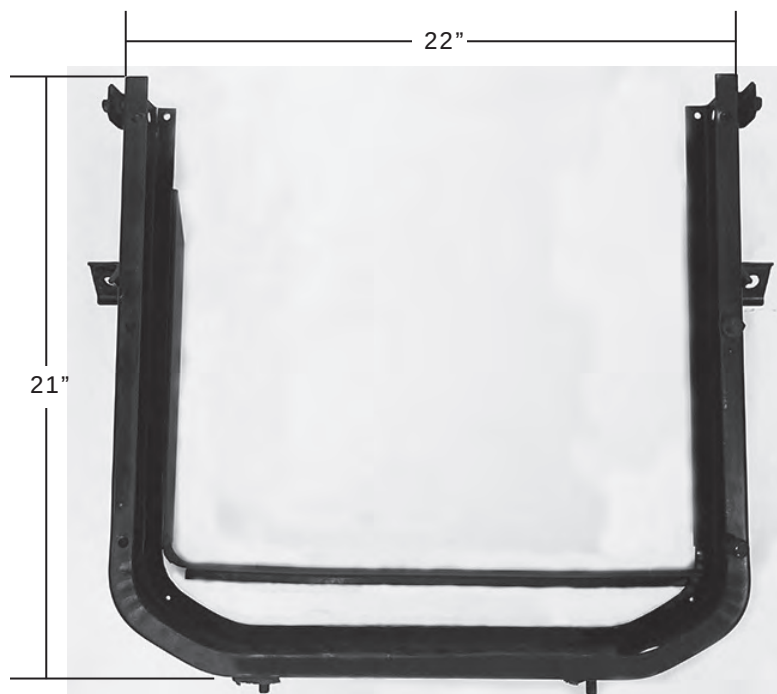
Heater hose may be purchased from Vintage Air (Part#31800-VUD) or your local parts retailer. Routing and required length will vary based on installer preference.



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Core Support Measurements

This kit was developed based on the measurements below, which were taken from a 1974 Toyota FJ40 without 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, photos & diagrams.

Perform the following:

1. Disconnect the battery.
2. Remove the battery (retain).
3. Drain the radiator.
4. Remove the radiator and the fan shroud by removing (6) or (7) bolts on the core support (retain) (See Photo 1, below).
5. Remove the core support by removing (2) core support rods, and (2) nuts and washers from beneath the frame (retain) (See Photos 1 and 2, below).

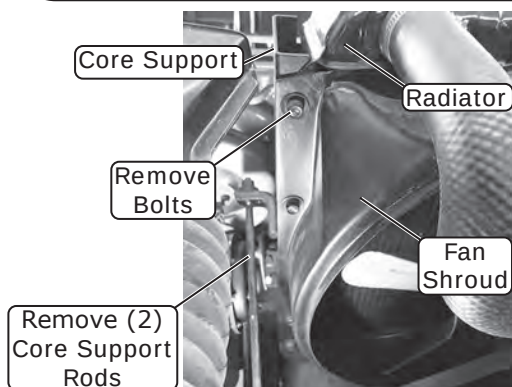


Photo 1

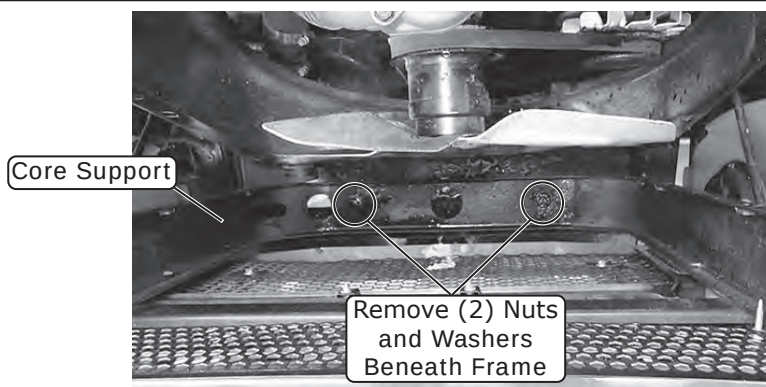


Photo 2

Core Support Modification

NOTE: In some cases, it may be necessary to modify the core support mounting location to provide sufficient clearance for the condenser in front of the radiator. If the core support sits directly behind the grille, follow Steps 1-3, below, to modify the core support mounting studs. If sufficient clearance exists between the core support and the grille, proceed to Step 4 on Page 6.

1. Cut the core support mounting studs flush with the bottom of the core support as shown in Photos 1 and 2, below.
2. Measure forward approximately 1 1/4" from the original mounting stud locations, and drill (2) 3/8" holes through the bottom of the core support (See Photo 2, below).
3. Insert (2) 3/8" bolts (not supplied) into the (2) 3/8" holes on the core support (See Photo 3, below).

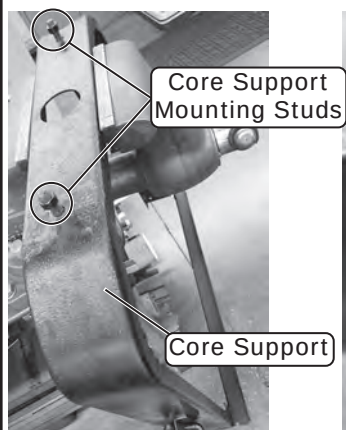


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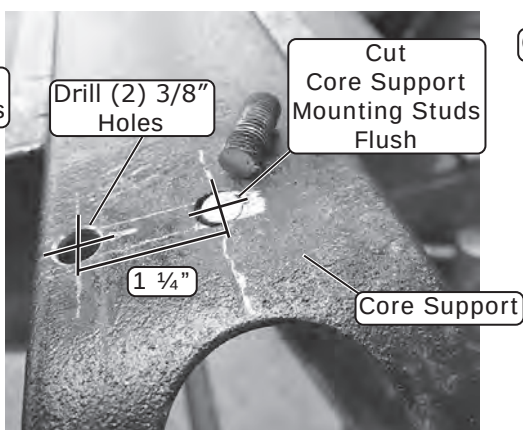


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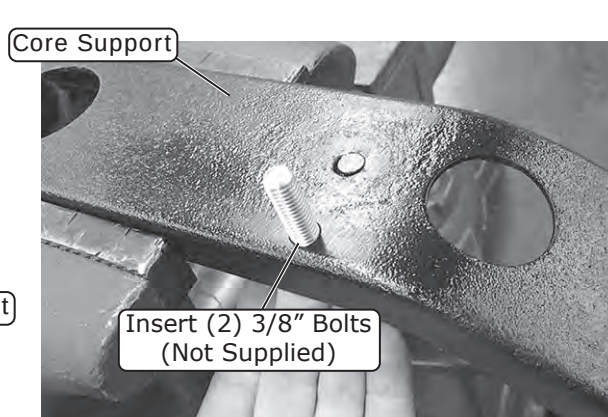


Photo 3



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Core Support Modification (Cont.)

NOTE: Step 10 applies only to core supports with a baffle. If no baffle is present, after Step 9, proceed to Condenser Mounting Bracket Installation on Page 7.

4. Place the core support on a workbench with the front side facing up as shown in Photo 4, below.
5. Place the condenser top mounting bracket onto the core support, aligning the bracket evenly with the top corners as shown in Photo 5, below.
6. Clamp the bracket into place, and mark the mounting hole locations on the core support as shown in Photo 5, below.
7. At the marked locations, drill a 1/4" hole into each side of the core support.
8. Temporarily install the condenser top bracket onto the core support using (2) 1/4-20 x 1/2" hex bolts and (2) 1/4-20 nuts with star washers (See Photo 6, below).
9. Remove the horizontal brace from the core support (See Photos 6 and 7, below). **NOTE: The brace is spot welded to the core support.**
10. If the core support has a baffle (See Photo 8, below), it will need to be modified to provide clearance for the hardlines. On the passenger side of the core support baffle, measure and mark 9 3/4" down from the top edge of the core support (See Photo 8, below). Then, measure and mark 12" down from the top edge of the core support. Remove this section from the baffle as shown in Photo 9, below.

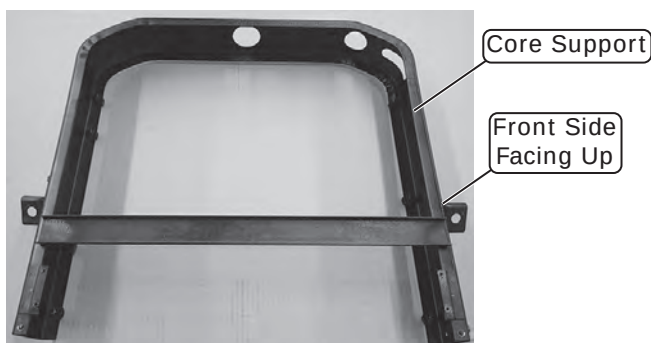


Photo 4

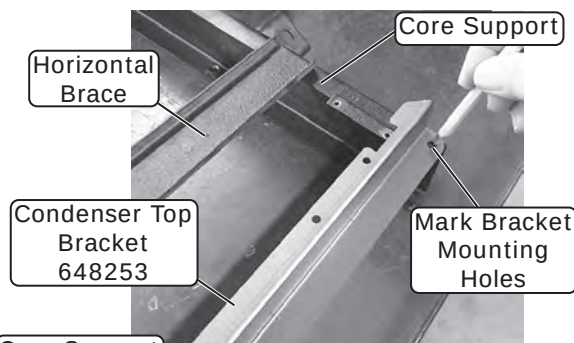


Photo 5

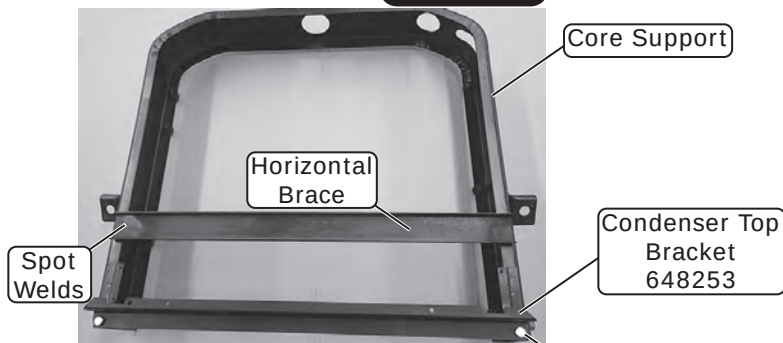


Photo 6

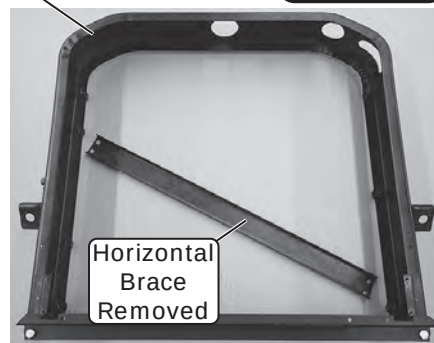


Photo 7

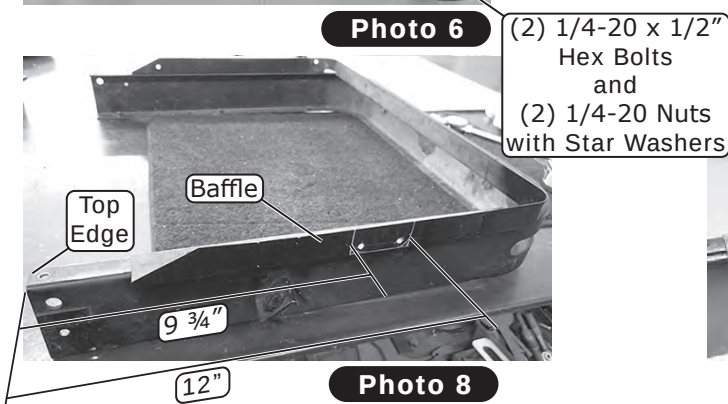


Photo 8



Photo 9



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Condenser Mounting Bracket Installation

1. Install (7) J-nuts onto the front mounting flanges on the condenser (See Photos 1 and 2, below). **NOTE: Install (4) J-nuts onto the top mounting flange at the 1st and 3rd holes from each end of the condenser. Install (3) J-nuts onto the bottom mounting flange at the 1st, 9th and 18th holes (See Photo 2, below).**
2. Remove the condenser top bracket from the core support, and install it onto the condenser using (4) #10 x 1/2" sheet metal screws (See Photo 3, below). Install the condenser bottom bracket onto the condenser using (3) #10 x 1/2" sheet metal screws (See Photo 3, below).
3. Place the condenser assembly onto the front of the core support. Secure the condenser top bracket to the core support using the (2) 1/4-20 x 1/2" hex bolts and (2) 1/4-20 nuts with star washers (See Photo 4, below).
4. Using the condenser bottom bracket as a guide, mark and drill (2) 5/32" holes into the core support (See Photo 5, below). **NOTE: The bottom bracket has (2) slots on each side. Use the slot that best fits the core support (See Photo 5, below).**
5. Secure the condenser bottom bracket to the core support using (2) #10 x 1/2" sheet metal screws (See Photo 6, below).

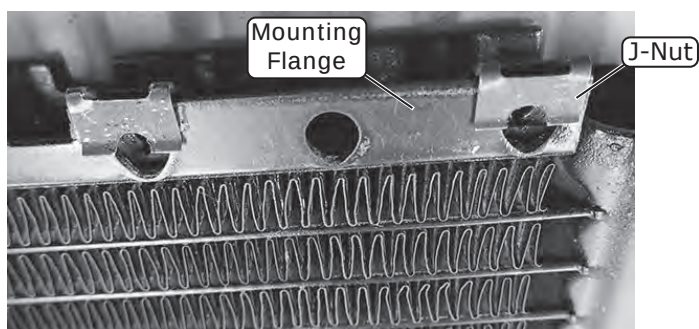


Photo 1

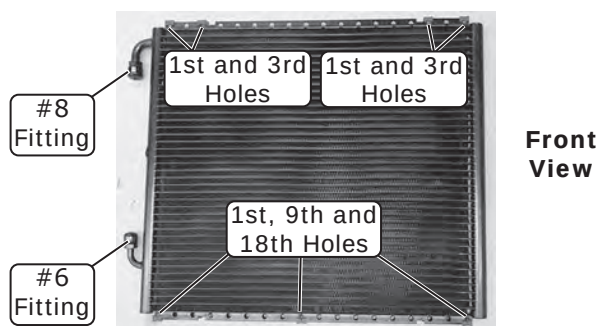


Photo 2

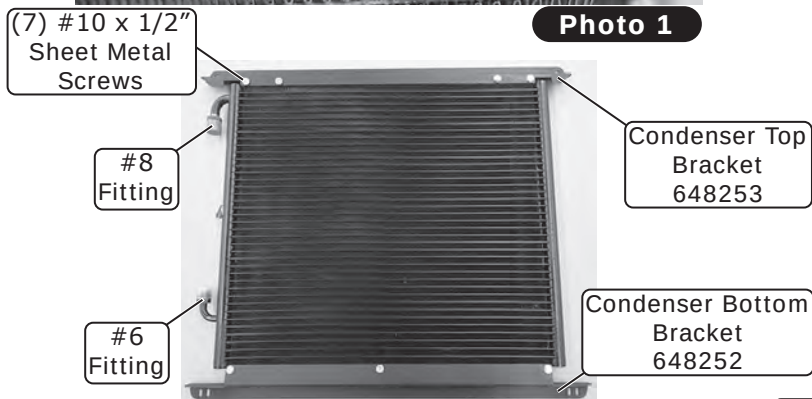


Photo 3

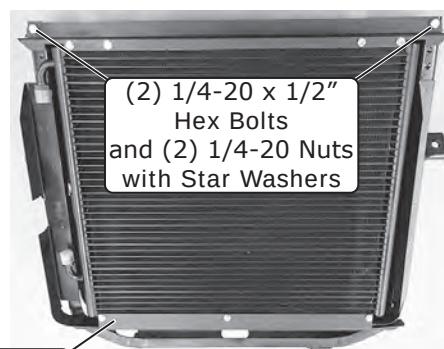


Photo 4

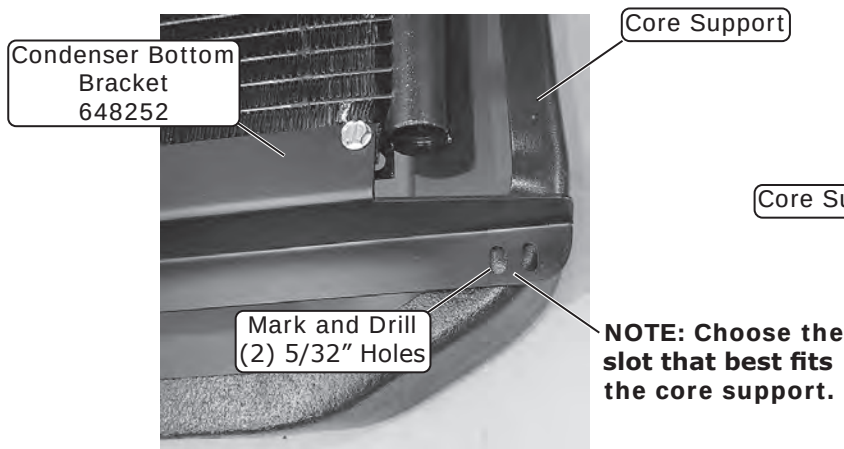


Photo 5

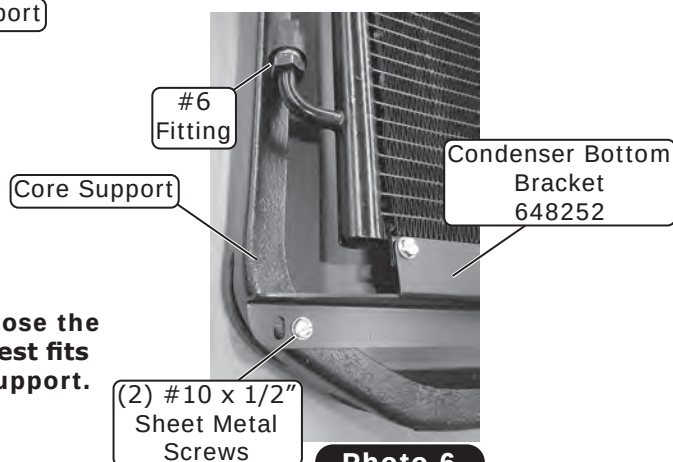


Photo 6



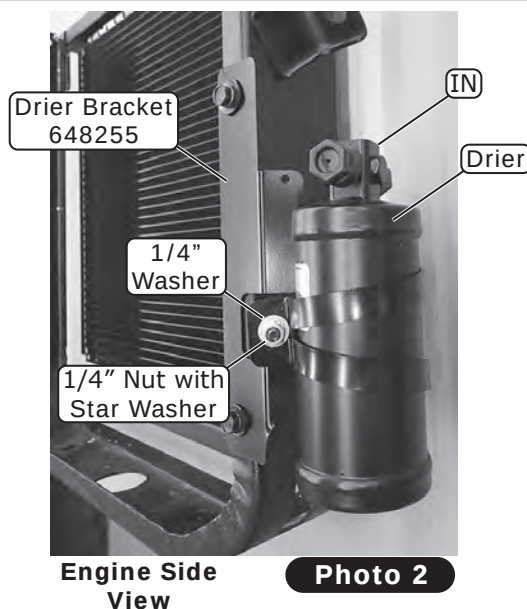
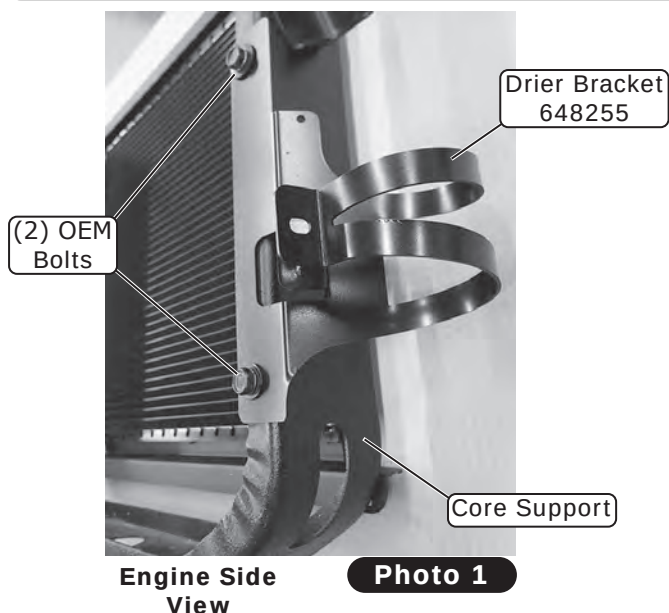
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Drier Installation

NOTE: Drier contains a desiccant that will quickly absorb moisture from the atmosphere and can lose effectiveness in less than 30 minutes. Remove caps and plugs only long enough to install safety switch and hardlines onto a sealed condenser assembly. Do not uncap again until ready to connect hoses and evacuate system before charging.

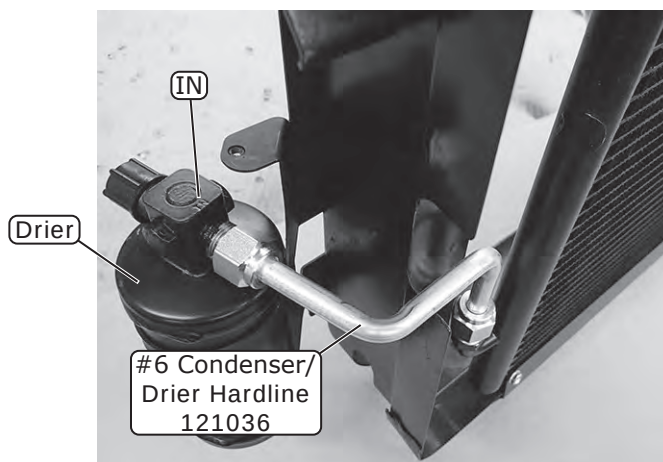
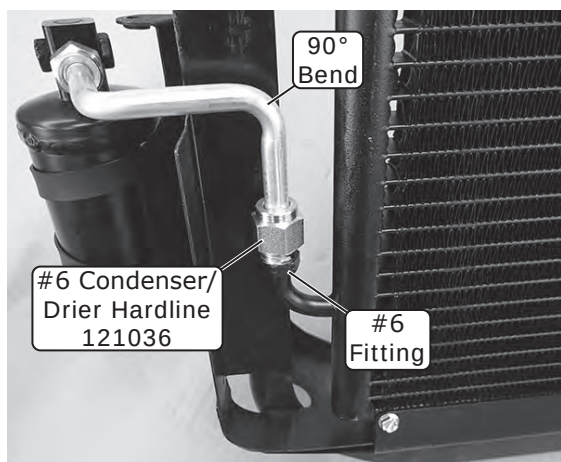
Perform the following:

1. Install the drier bracket onto the engine side of the core support using (2) OEM bolts (See Photo 1, below).
2. Install the drier into the drier bracket, and secure it using a 1/4" washer and a 1/4" nut with star washer (See Photo 2, below). **NOTE: Refrigerant flow through the drier is IN from condenser, OUT to evaporator. Do not fully tighten the nut at this time.**



Hardline and Binary Switch Installation

1. Lubricate (2) #6 O-rings, and install one onto each end of the #6 condenser/core hardline (See Figure 1, Page 9). Install the end of the hardline with the 90° bend onto the #6 condenser fitting (See Photo 1, below).
2. Align and install the opposite end of the #6 condenser/drier hardline onto the drier at the IN fitting (See Photo 2, below). Tighten both ends of the hardline (See Figure 1, Page 9). **NOTE: Tighten the 1/4" nut with star washer securing the drier to the drier bracket at this time.**





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Hardline and Binary Switch Installation (Cont.)

3. Lubricate a #8 O-ring, and install it onto the female end of the #8 condenser/core hardline (See Figure 1, below). Install the #8 condenser/core hardline onto the #8 condenser fitting as shown in Photo 3, below.
NOTE: Do not fully tighten the #8 hardline at this time. If the core support has a baffle, the #6 and #8 hardlines will pass through the opening (See Photo 4, below).
4. Secure the #8 condenser/core hardline onto the drier bracket tab using a 1/2" Adel clamp and a 10-24 x 1/2" screw as shown in Photo 4, below. Fully tighten the #8 condenser/core hardline on the #8 condenser fitting at this time. **NOTE: The opposite end of the #8 condenser/core hardline will connect to the #8 A/C hose leading to the compressor.**
5. Install the binary switch onto the drier with a properly lubricated O-ring (See Photo 5, below). **NOTE: The binary switch and the drier each come with an O-ring. Only one of the (2) O-rings will be used.**

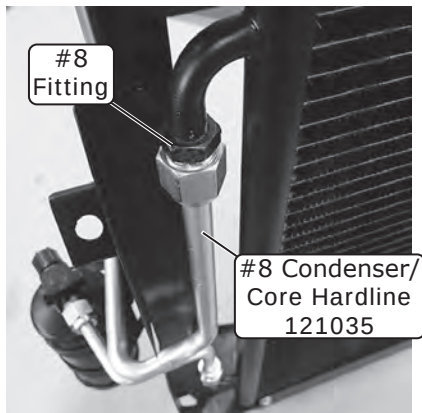


Photo 3

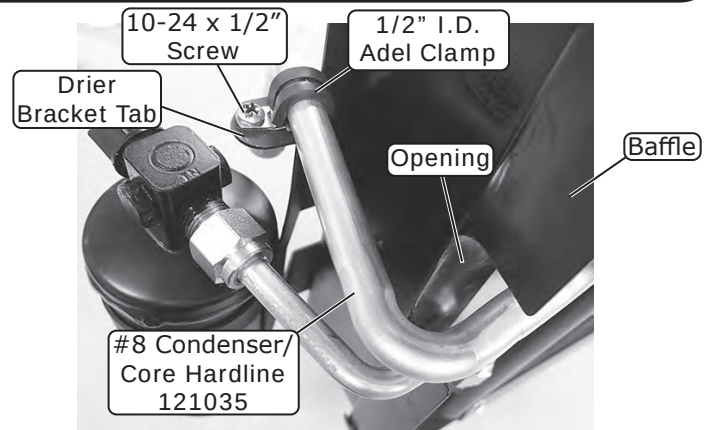


Photo 4

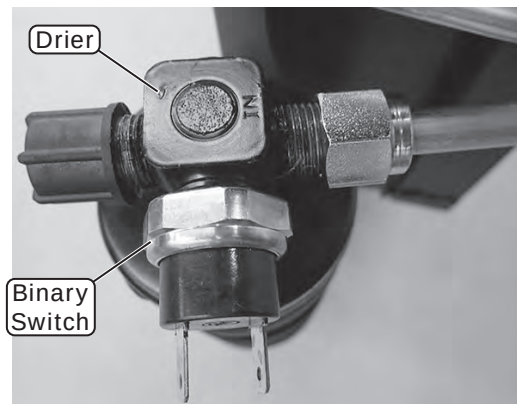
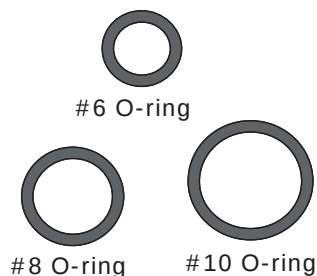
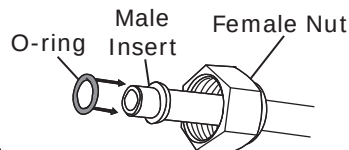


Photo 5

Lubricating O-rings

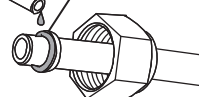


NOTE: Standard torque specifications:
 #6: 11 to 13 ft-lb.
 #8: 15 to 20 ft-lb.
 #10: 21 to 27 ft-lb.



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.

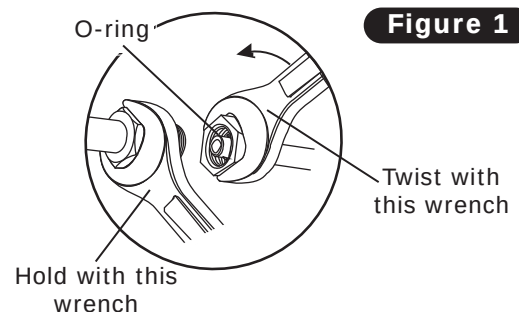


Figure 1



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Grille Emblem Modification

NOTE: The Toyota grille emblem must be modified to prevent it from hitting the condenser during and after installation.

1. Remove the Toyota grille emblem (See Photos 1 and 2, below), and cut the mounting screws flush with the plastic extensions as shown in Photos 3 and 4, below.
2. Round off the top edge of the plastic extensions with a file (See Photo 4, below), and insert the emblem through the grille bar in the original location (See Photo 5, below).
3. Secure the emblem to the grille bar using (2) 7/16" washers and (2) 3/8" push-on rings as shown in Photo 5, below. **NOTE: The push-on rings install onto the plastic extensions with the spring tabs pointing toward the engine.**



Photo 1



Photo 2

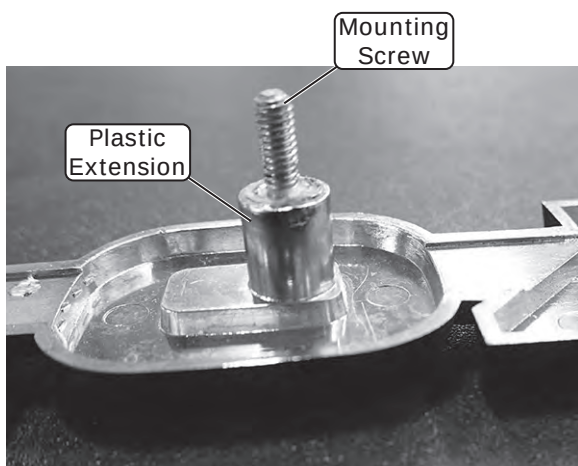


Photo 3

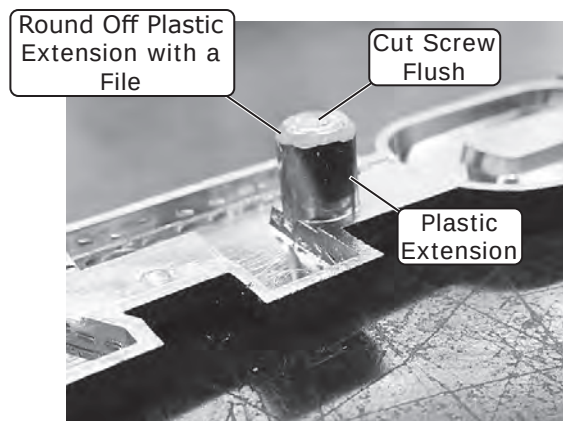


Photo 4

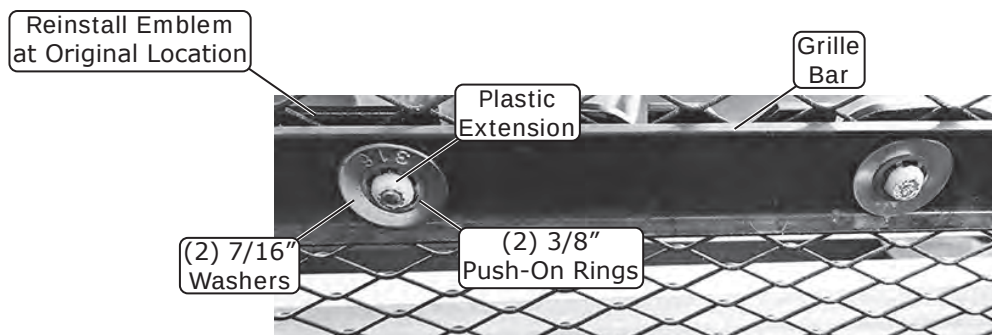


Photo 5



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Core Support Installation

1. Place the fan shroud behind the fan (See Photo 1, below), and place the core support assembly (with the (2) studs facing toward the bottom) onto the (2) brackets/pads on the frame crossmember. Secure the core support using (2) OEM washers and nuts underneath the frame (See Photos 2 and 3, below). Reinstall the core support rods onto each side of the core support (See Photo 4, below).
2. From the top, slide the radiator into the core support (See Photo 5, below). Remove the (2) OEM bolts holding the drier bracket assembly onto the core support, and slide the bracket over the radiator and fan shroud flanges (See Photo 6, below).
3. Secure the radiator, the fan shroud and the drier bracket assembly to the core support using the OEM bolts.

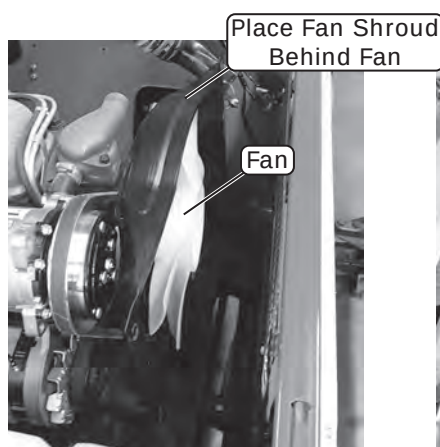


Photo 1

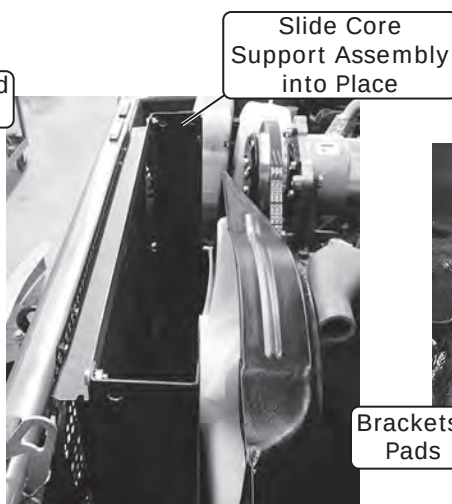


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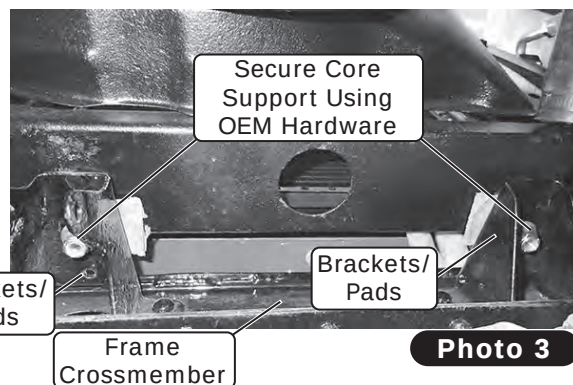


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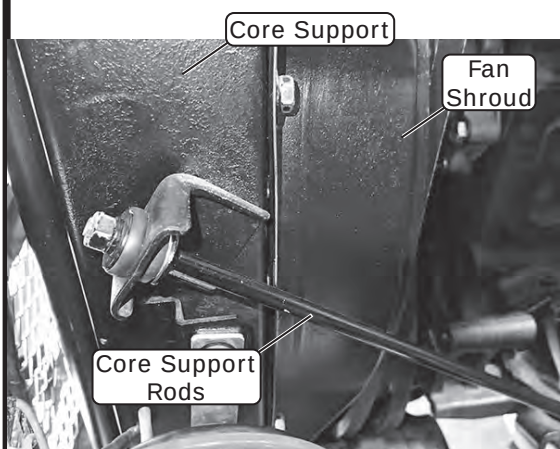


Photo 4

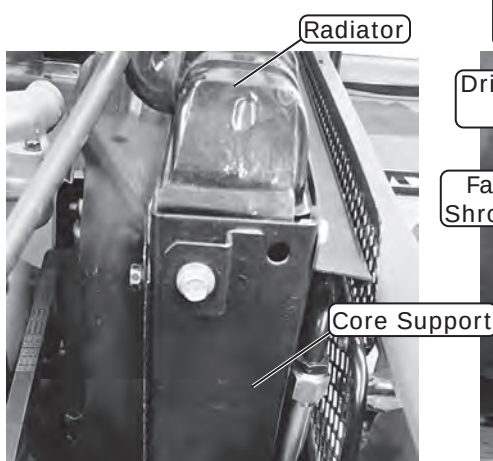


Photo 5

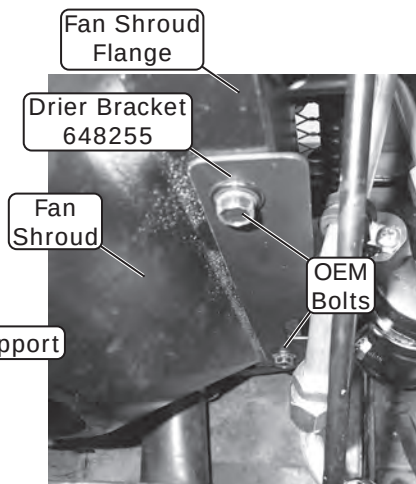


Photo 6

Final Steps

1. 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 (061200)

O-rings / Refrigerant Oil

	Qty		Part No	Description
	1	☐	11079-VUS	Binary Switch, Male
	3	☐	18152-VUB	Nut with Star Washer, 1/4-20, Hex
	1	☐	182479	Screw, 10-24 x 1/2", Pan Head
	9	☐	18247-VUB	Screw, #10 x 1/2", Sheet Metal
	2	☐	18287-VUB	Bolt, 1/4-20 x 1/2", Hex
	2	☐	18425-VUB	Washer, 7/16", Flat
	2	☐	18514-VUB	Push-On Ring, 3/8"
	1	☐	186011	Washer, 9/32", Flat
	7	☐	18979-VUB	J-nut, #8
	1	☐	23135-VUW	Compressor Lead
	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	☐	648252	Bracket, Condenser, Bottom
	1	☐	648253	Bracket, Condenser, Top
	1	☐	648255	Bracket, Drier

Packed By: _____

Hardlines / Hoses

	Qty		Part No	Description
	1	☐	121035	Hardline, #8 Condenser/Core
	1	☐	121036	Hardline, #6 Condenser/Drier

Packed By: _____

Condenser / Drier

	Qty		Part No	Description
	1	☐	037036	Condenser, 17" x 19", Parallel Flow
	1	☐	07321-VUC	Drier

Packed By: _____

Inspected By: _____
Date: _____