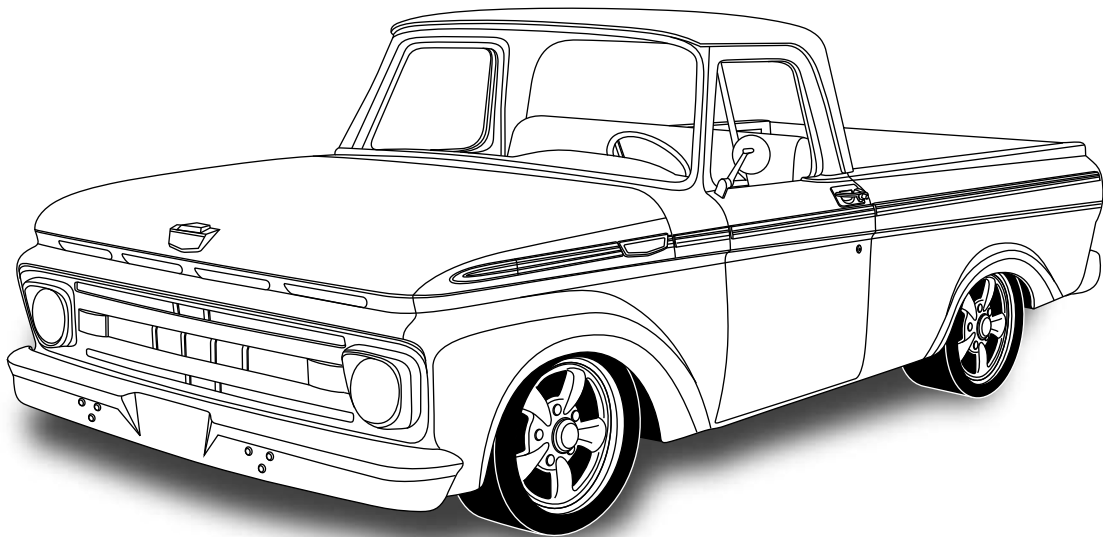




an ISO 9001:2008 Registered Company

# **1961-65 Ford F-100**

**Condenser Kit *with* Drier**  
**(011150)**



**18865 Goll St. San Antonio, TX 78266**  
**Phone: 210-654-7171**  
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# Table of Contents

**Thank you for purchasing this condenser kit from Vintage Air. When installing these components as part of a complete SureFit™ system, Vintage Air recommends working from front to back on the vehicle, installing the condenser kit, hose kit, and compressor first, followed by the wiring, evaporator, and finally the control panel.**

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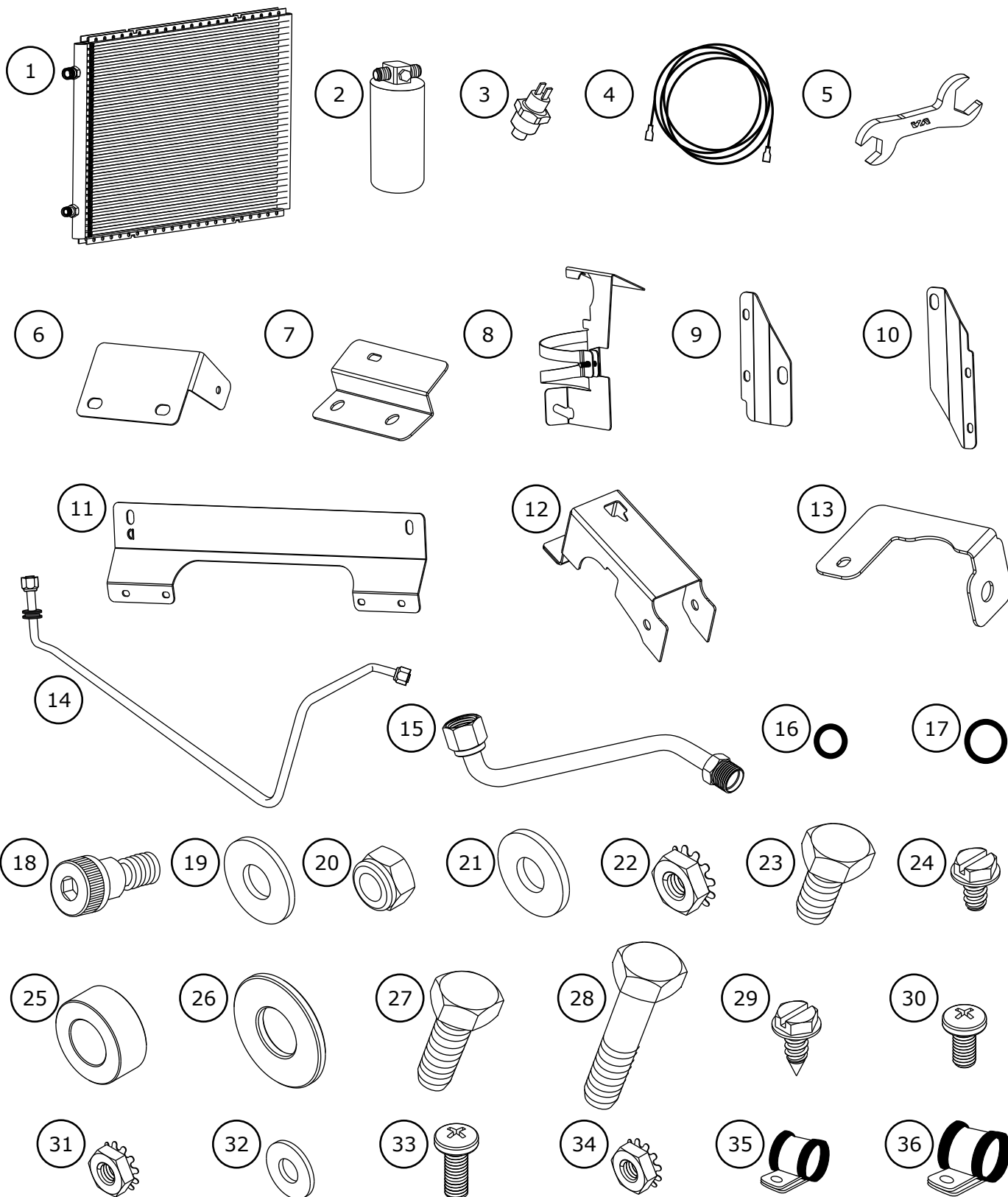
## **Packing List: Condenser Kit (011150)**

<b>No.</b>	<b>Qty.</b>	<b>Part No.</b>	<b>Description</b>
1.	1	03767-VUC	Condenser, 14" x 24", Parallel Flow
2.	1	07321-VUC	Drier
3.	1	11079-VUS	Binary Switch, Male
4.	1	23135-VUW	Compressor Lead
5.	1	646917	Wrench
6.	1	646922	Template, Core Support Hardline Register (1961-64 Models)
7.	1	646923	Bracket, #6 Hardline Support
8.	1	646925	Bracket, Drier Assembly
9.	1	646926	Bracket, Condenser, Driver Side
10.	1	646927	Bracket, Condenser, Passenger Side
11.	1	646928	Bracket, Condenser, Top
12.	1	646936	Bracket, Hood Latch Handle
13.	1	646932	Bracket, #8 Hardline Support
14.	1	081156	Hardline, #6 Condenser/Drier
15.	1	081157	Hardline, #8 Condenser/Compressor
16.	2	33857-VUF	O-ring, #6
17.	1	33858-VUF	O-ring, #8
18.	2	183814	Shoulder Bolt, 5/16" x 1/4" x 1/4-20
19.	2	18544-WNS	Washer, 5/16", AN Flat
20.	2	181490	Locknut, 1/4-20
21.	5	18125-VUB	Washer, 1/4", Flat
22.	3	18152-VUB	Nut, 1/4-20, with Star Washer
23.	2	182871	Hex Bolt, 1/4-20 x 3/4"
24.	3	182360	Screw, 5/16-18 x 3/4", Self-Tapping
25.	4	180034	Spacer, .750" OD x .406" ID x .313 Length
26.	4	18029-VUB	Washer, 3/8", Flat
27.	4	18359-VUB	Hex Bolt, 3/8-16 x 1"
28.	4	18042-VUB	Hex Bolt, 3/8-24 x 1 1/2"
29.	1	18247-VUB	Screw, #10 x 1/2", Sheet Metal
30.	9	18249-VUB	Screw, 10-24 x 3/8"
31.	9	18260-VUB	Nut with Star Washer, 10-24
32.	1	18123-VUB	Washer, 3/16" x 1/2", SAE Flat
33.	1	18250-VUB	Screw, 10-32 x 1/2"
34.	1	18251-VUB	Nut, 10-32
35.	1	31600-VUD	Adel Clamp, #2
36.	1	31603-VUD	Adel Clamp, #4

**\*\* 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.**

**Refer to Packing List Illustrations, Page 4, for  
illustrations of parts listed above.**

## Packing List Illustrations: Condenser Kit (011150)



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



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## Important Notice—Please Read

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

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

### Refrigerant Capacities:

**Vintage Air System:** 1.8 lbs. (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):

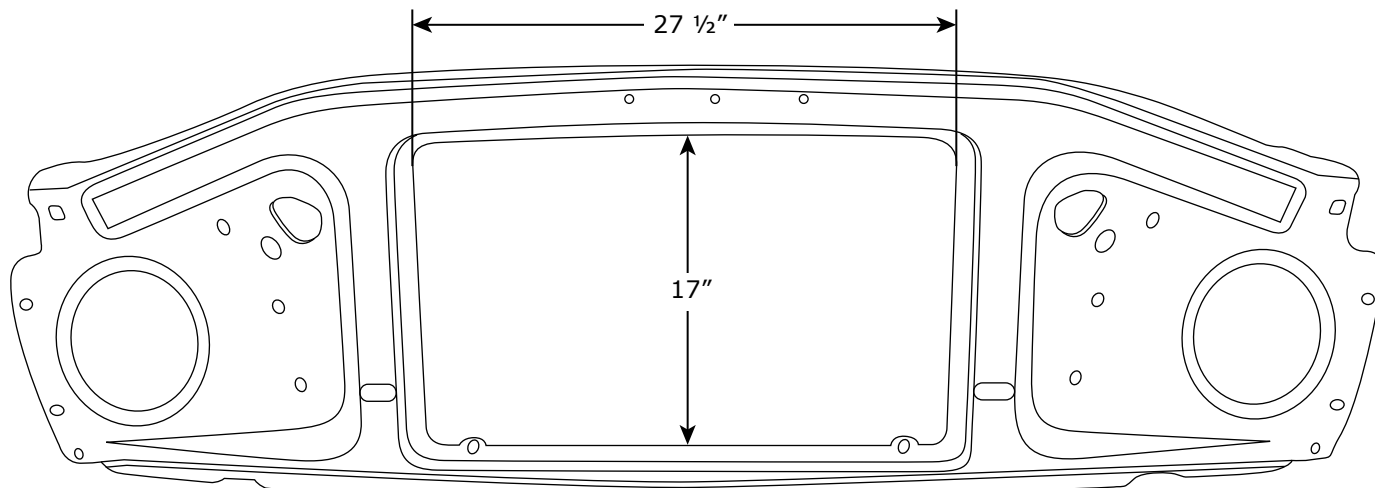
Heater hose may be purchased from Vintage Air (Part# 31800-VUD) or your local parts retailer. Routing and required length will vary based on installer preference.



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## Core Support Measurements

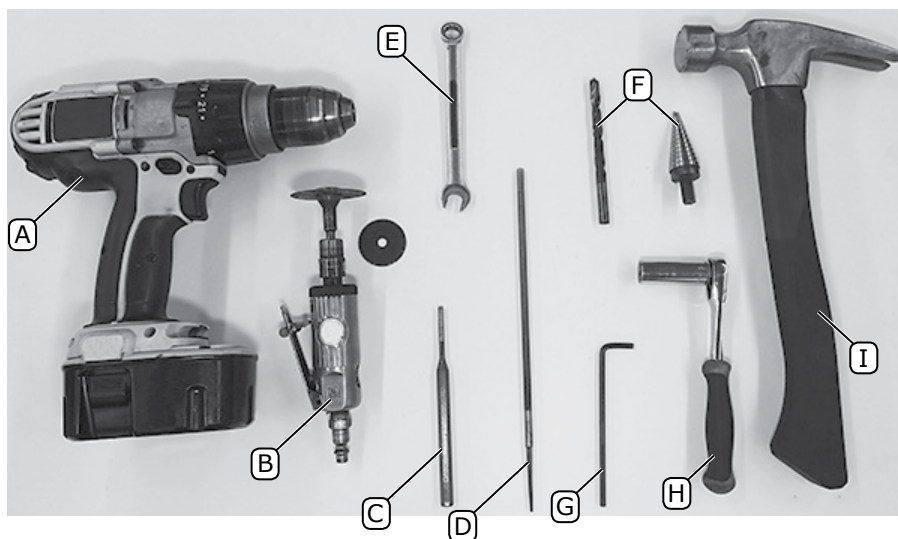
This kit was developed based on the measurements below, which were taken from a 1965 Ford F-100 without factory air.



## 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 8 and 9 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





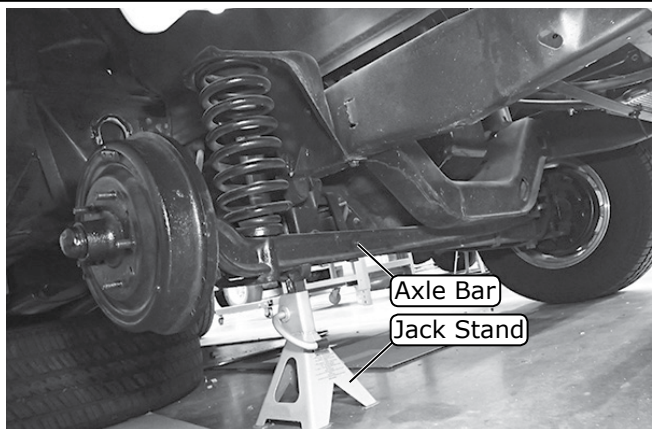
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## Engine Compartment Disassembly

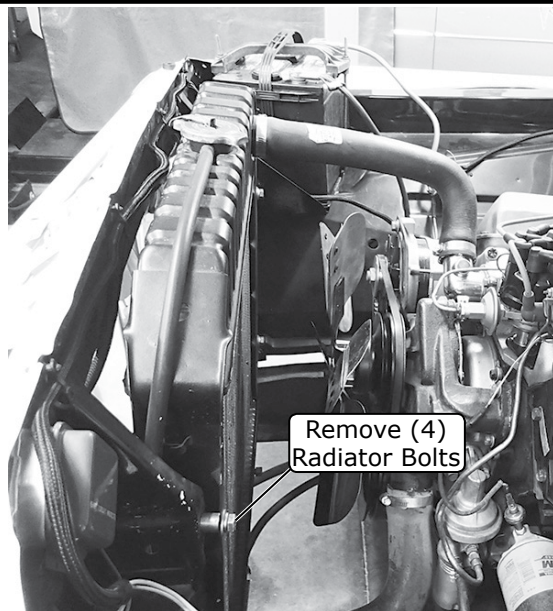
**NOTE:** Before starting the installation, check the function of the vehicle (horn, lights, etc.) for proper operation, and study the instructions, illustrations, & diagrams. Retain OEM bolts, washers and nuts, as some hardware will be reused.

### Perform the Following:

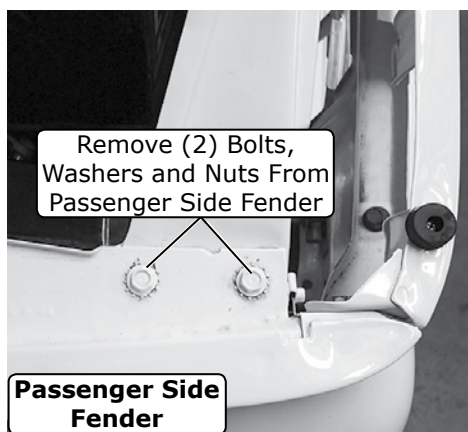
1. Disconnect the battery.
2. Place a jack stand under the axle bar on the passenger side of the vehicle (See Photo 1, below), and remove the passenger side front tire.
3. Drain the radiator.
4. Remove the radiator by removing (4) bolts (retain) (See Photo 2, below).
5. Remove (2) bolts, washers and 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**



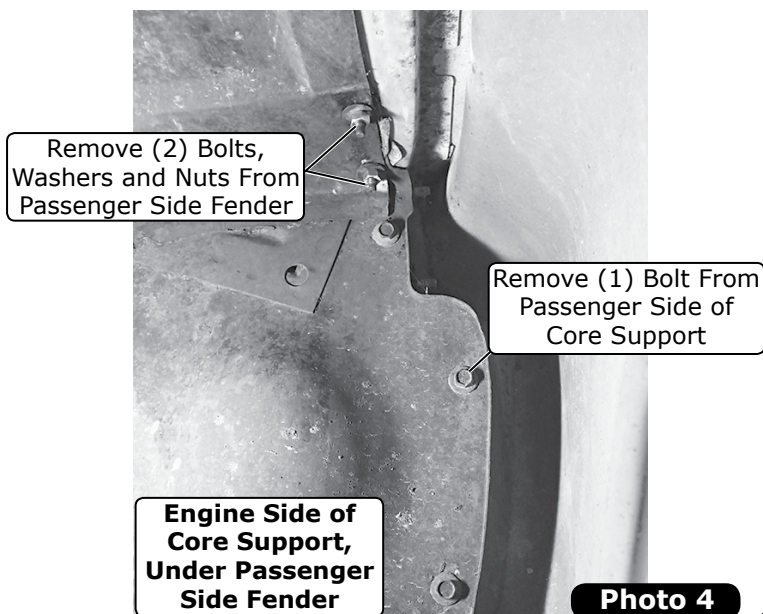
**Photo 2**



**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 6, 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 7 and 8, below). Use a hammer and punch to knock out the rivets (discard) (See Photo 9, below).
3. Using a 5/16" drill bit or a step bit, enlarge the 1/4" rivet holes to 5/16" (See Photo 10, below).
4. Use a file to deburr the 5/16" holes (See Photo 11, below).

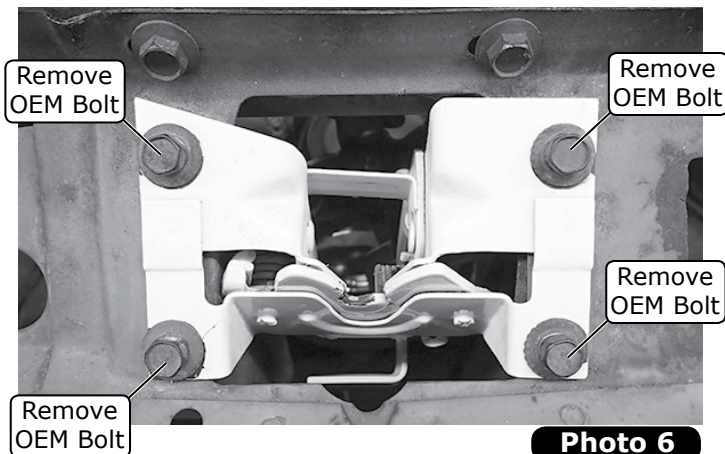


Photo 6

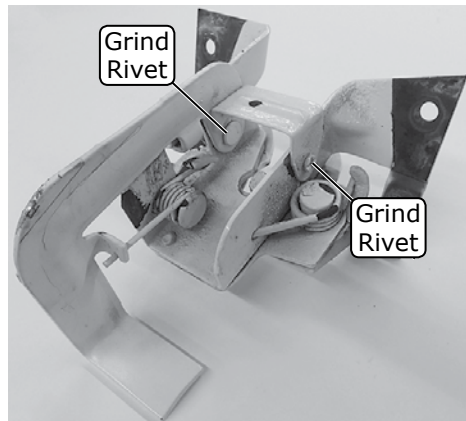


Photo 7

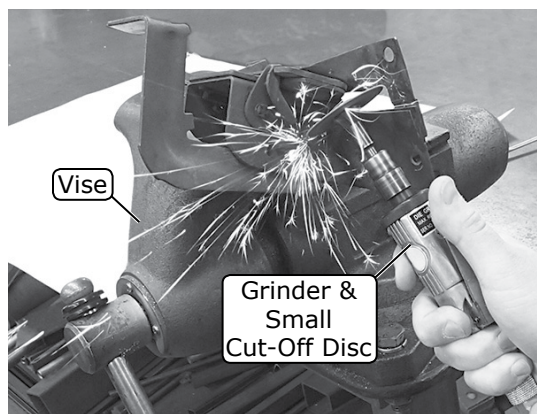


Photo 8

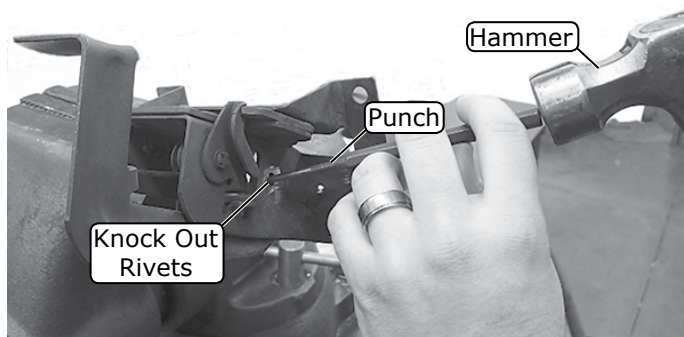


Photo 9

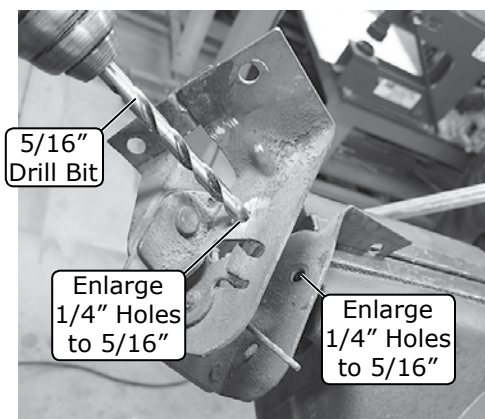


Photo 10

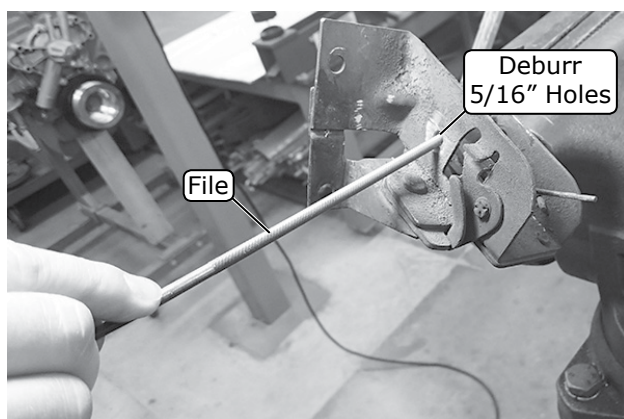


Photo 11



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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 12, 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 13 and 14, 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 14 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 15, below).

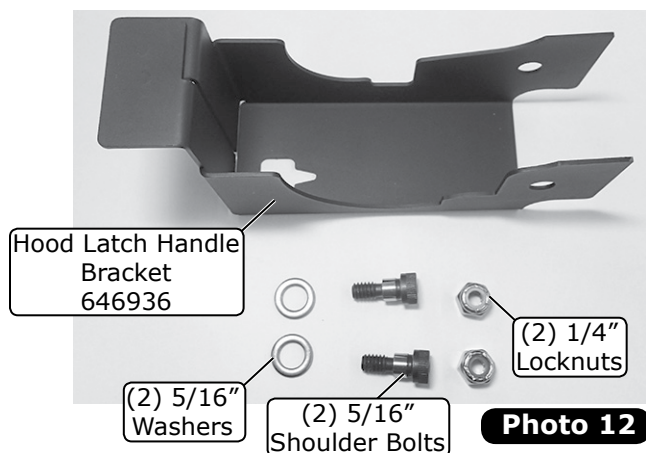


Photo 12

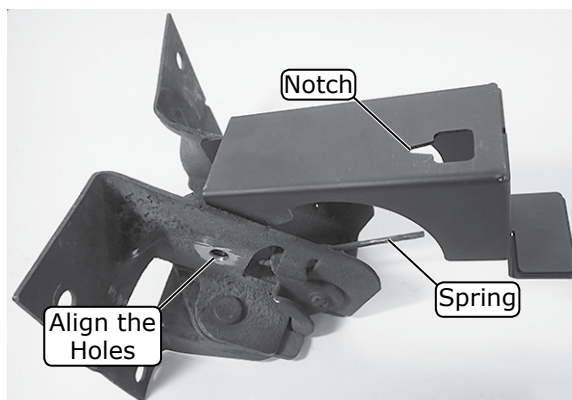


Photo 13

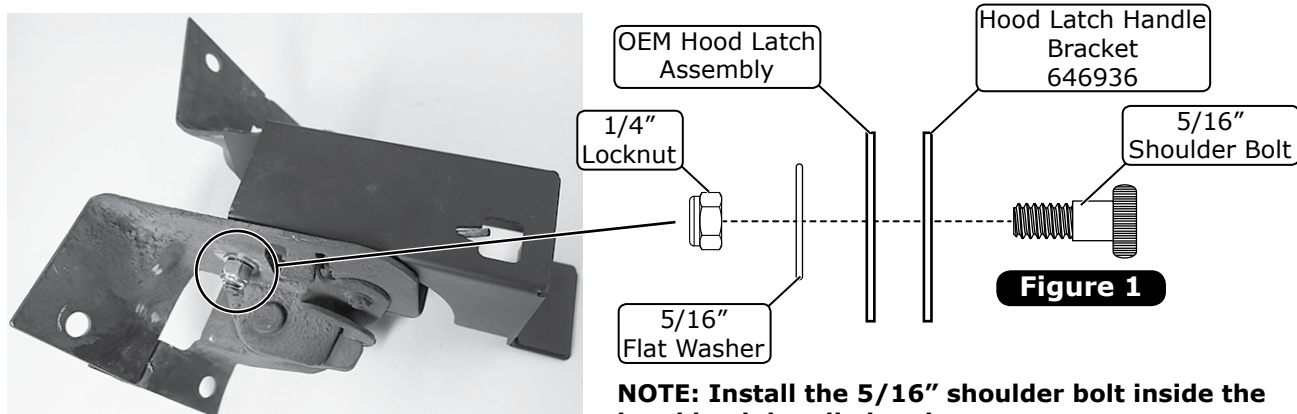


Photo 14

Figure 1

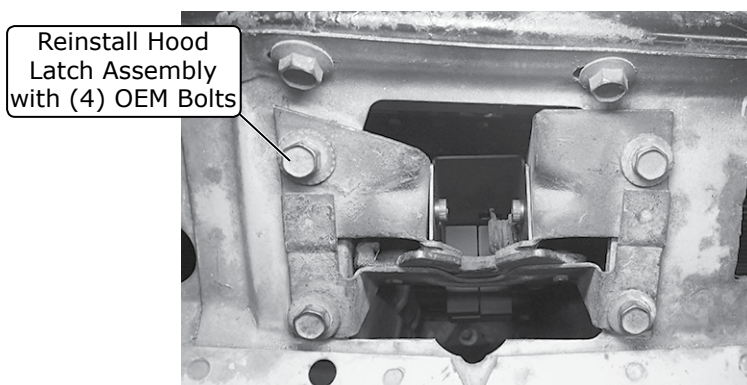


Photo 15



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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 7, and Photo 16, below).
2. Using the 1/4" hole on the template, mark the center of the hole to be drilled (See Photo 16, below).
3. Remove the template and drill a 7/8" hole from the engine side of the core support (See Photo 17, below).
4. Use a file to deburr the 7/8" hole.

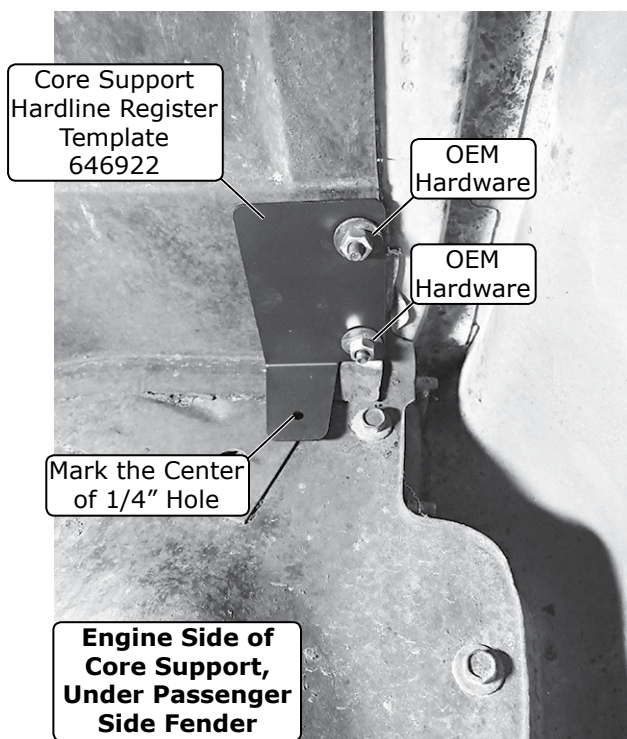


Photo 16

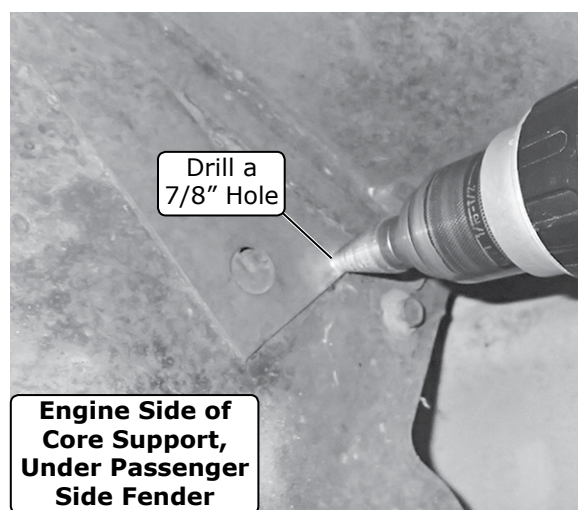


Photo 17

## 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 18, below).
2. Use a file to deburr the 7/8" hole.

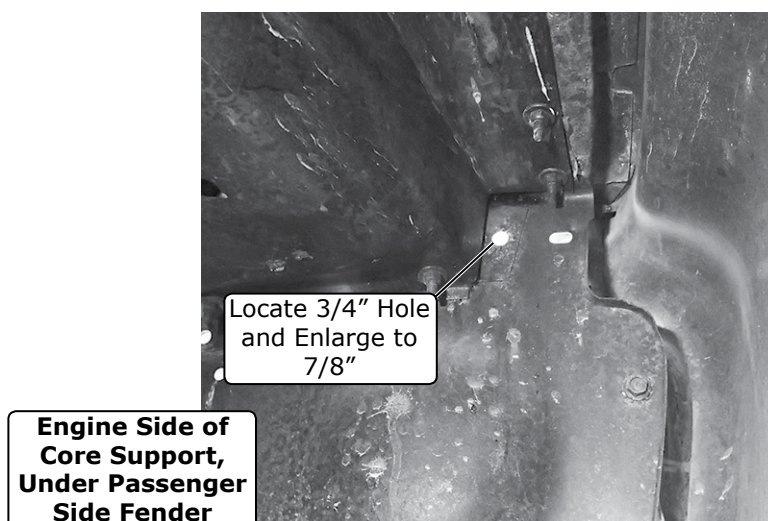


Photo 18



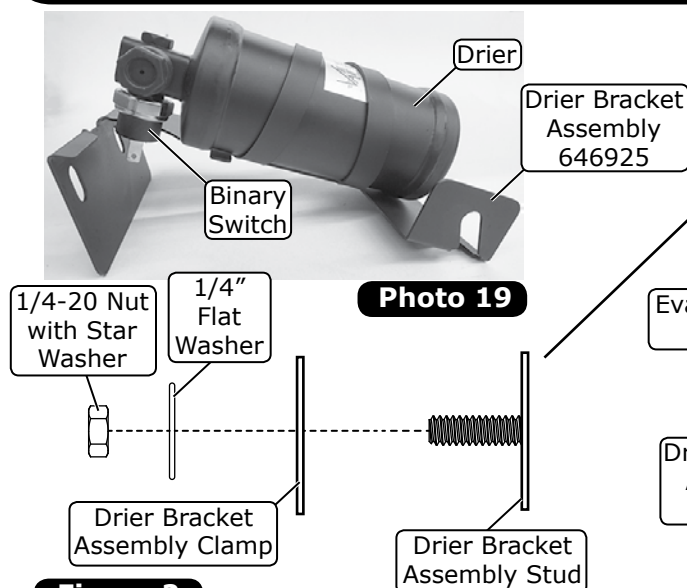
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## Drier and Binary Switch Installation

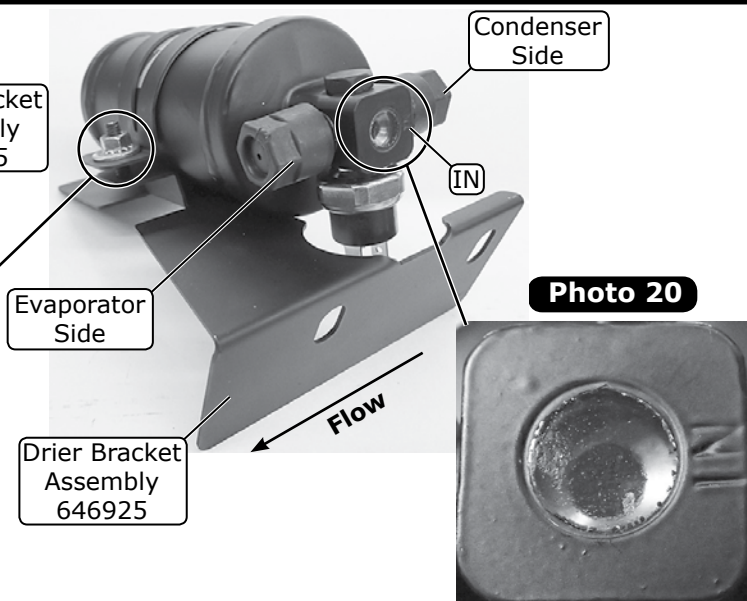
**NOTE: Do not remove the caps from the drier. The drier contains a desiccant that will quickly absorb moisture from the air, causing it to lose effectiveness. For this reason, Vintage Air recommends that the drier remains capped until the installer is ready to evacuate the system.**

### Perform the Following:

1. On a workbench, lubricate the binary switch O-ring and install the binary switch onto the drier (See Photo 19, below).
2. Install the drier into the drier bracket assembly (See Photos 19 and 20, 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 20 and Figure 2, 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 20, below).

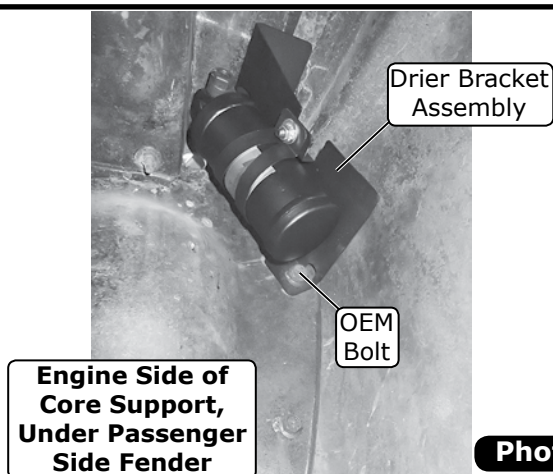


**Figure 2**

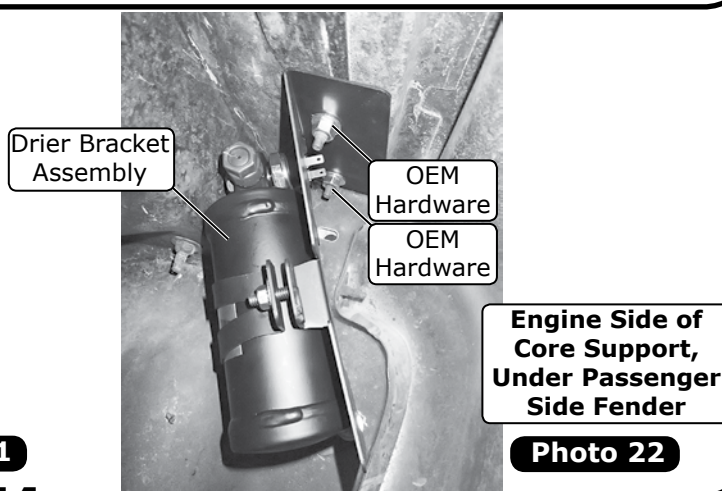


## Drier Assembly Installation

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 21, below).
2. Using (2) OEM bolts, (2) OEM washers and (2) OEM nuts, secure the top side of the drier bracket assembly (See Photo 22, below). **NOTE: Do not fully tighten hardware until the #6 condenser/drier hardline has been installed.**



**Photo 21**



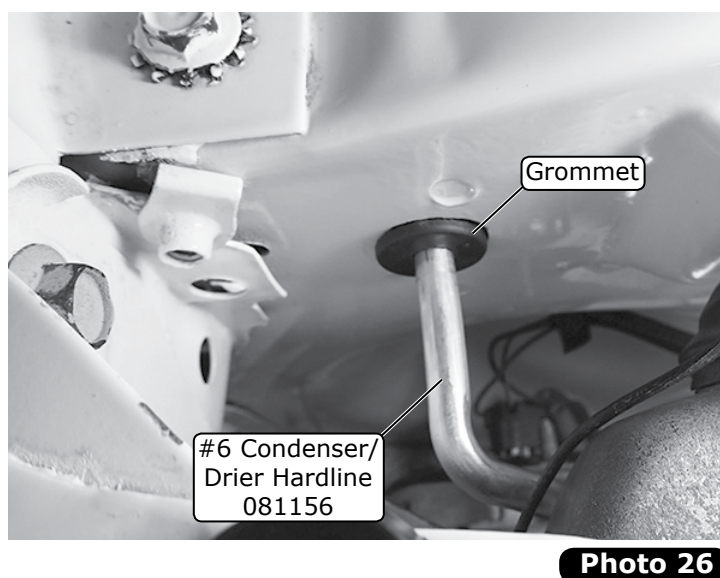
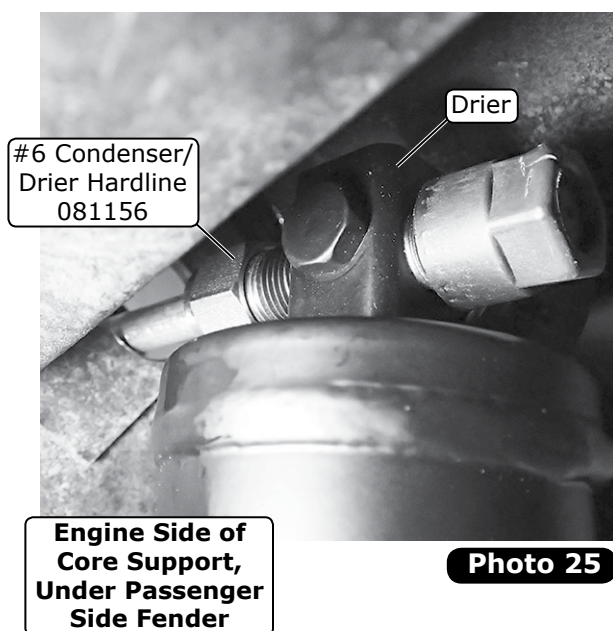
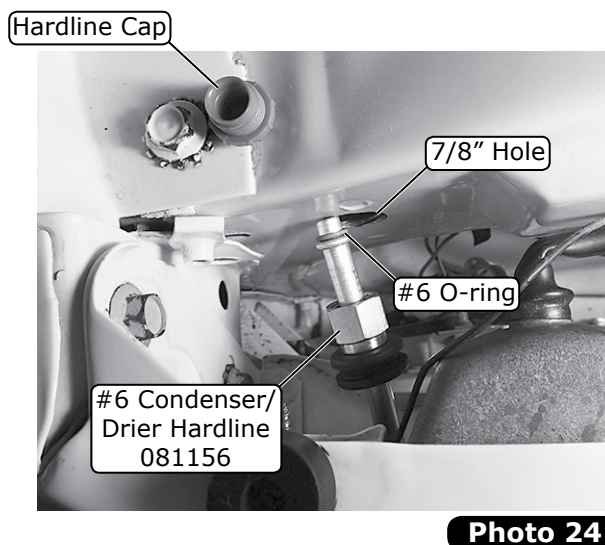
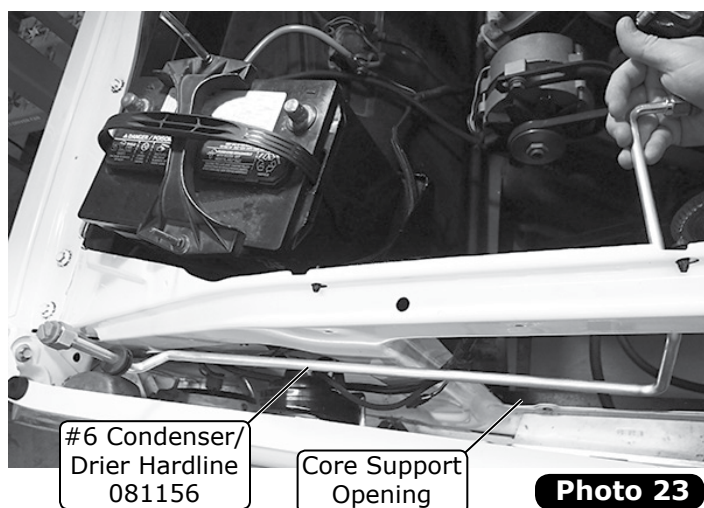
**Photo 22**



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## #6 Hardline Installation

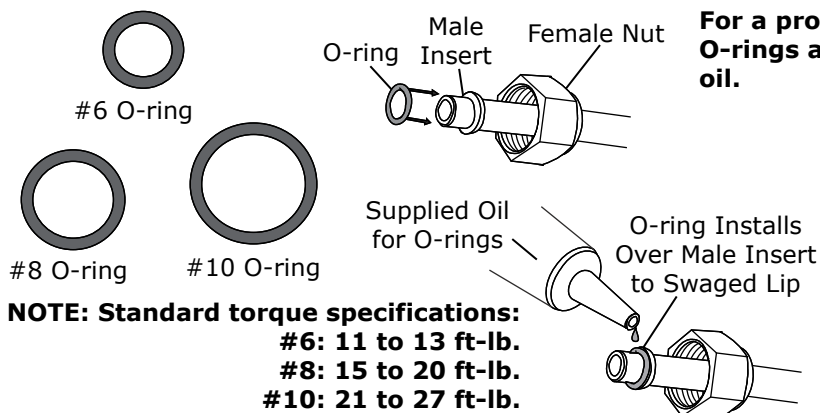
1. Carefully insert the #6 condenser/drier hardline through the engine side of the core support opening (See Photo 23, below).
2. Remove the hardline cap. Lubricate a #6 O-ring and install it onto the #6 condenser/drier hardline as shown in Photo 24, below, and Figure 3, Page 13. Insert the end of the hardline through the 7/8" hole on the core support (See Photo 24, below).
3. Remove the drier cap and install the #6 condenser/drier hardline onto the drier using the 3/4" wrench provided (See Photo 25, 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 26, below).



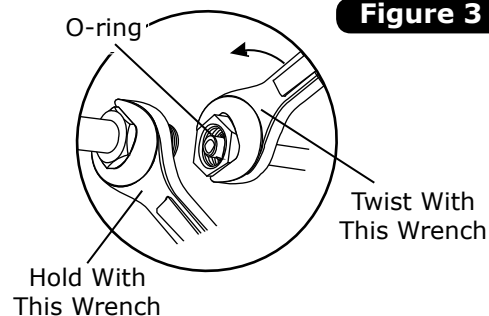


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## Lubricating O-rings

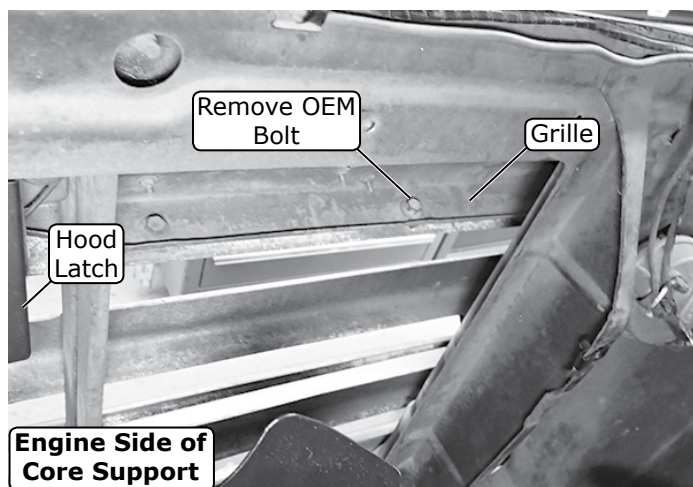


**For a proper seal of fittings: Install supplied O-rings as shown, and lubricate with supplied oil.**

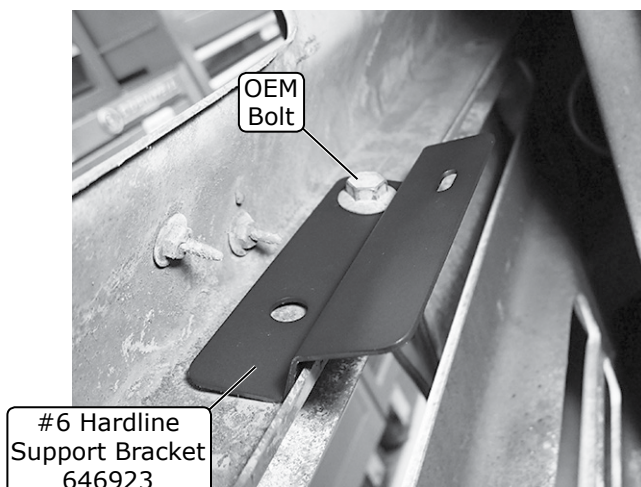


## #6 Hardline Support Bracket Installation (1961-64 Models Only)

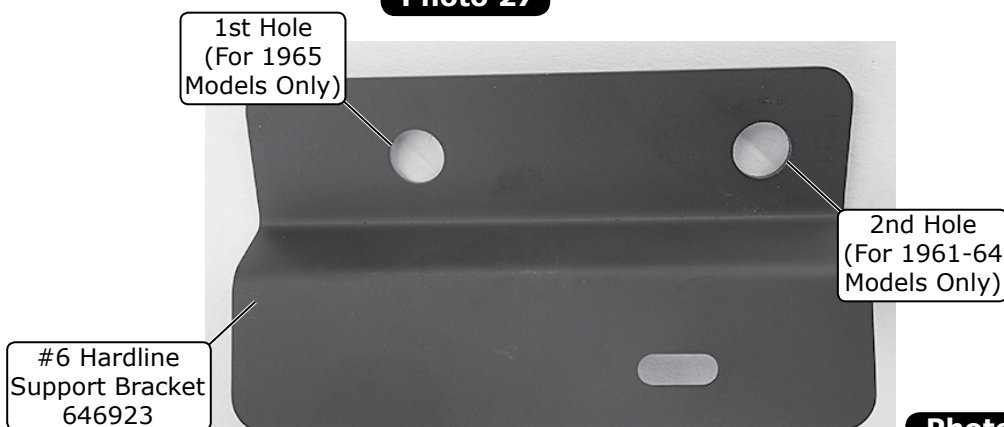
1. On the engine side of the grille, remove the 2nd bolt on the passenger side next to the hood latch (See Photo 27, below).
2. Install the #6 hardline support bracket, and secure it using the OEM bolt removed in Step 1, above (See Photo 28, below). **NOTE: Secure the hardline support bracket using the 2nd hole on the bracket (See Photo 29, below).**



**Photo 27**



**Photo 28**



**Photo 29**



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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 30, below).
2. Install the #6 hardline support bracket, and secure it using the OEM bolt removed in Step 1, above (See Photo 31, below). **NOTE: Secure the hardline support bracket using the 1st hole on the bracket (See Photo 29, Page 13).**

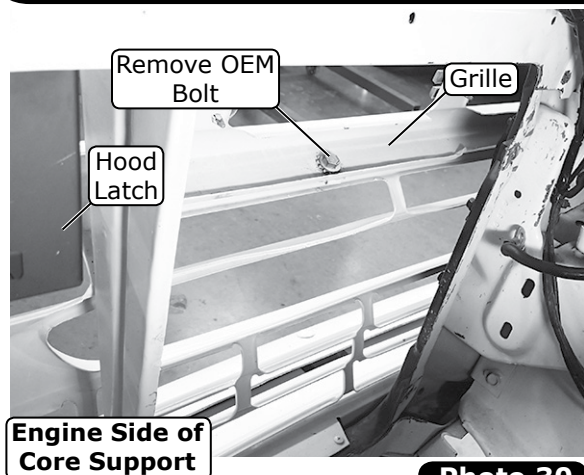


Photo 30

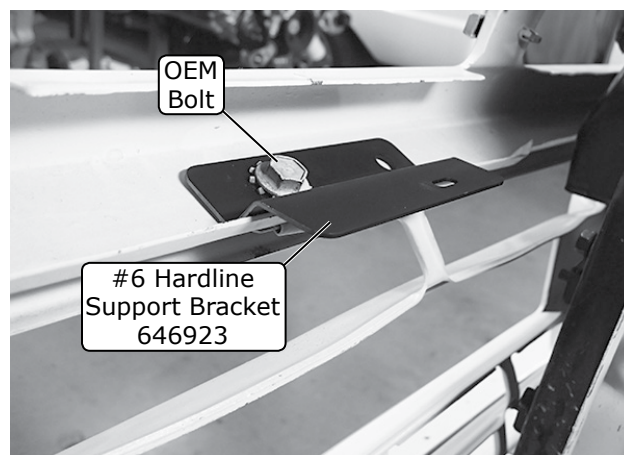


Photo 31

## 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 4, 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 5, 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 5, below). **NOTE: The condenser passenger side bracket mounts to the outside of the flange through the 1st and 3rd holes from the left.**

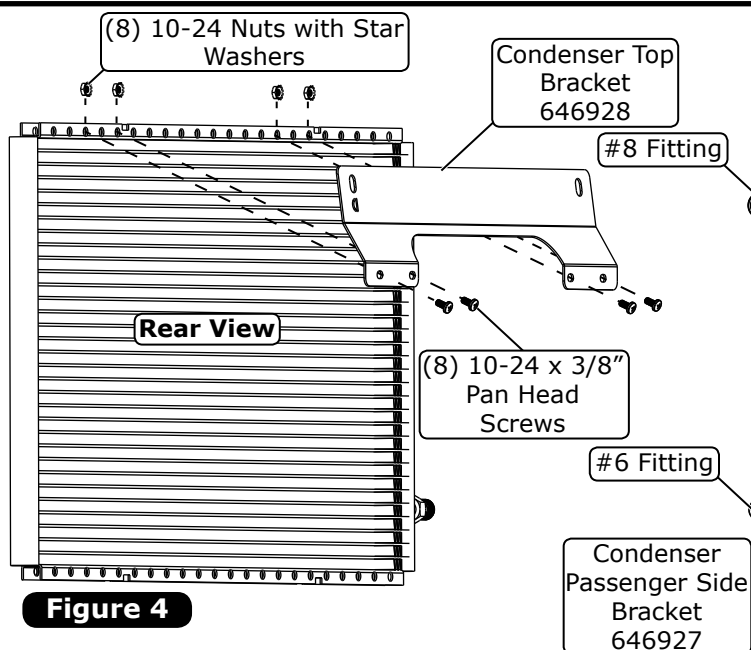


Figure 4

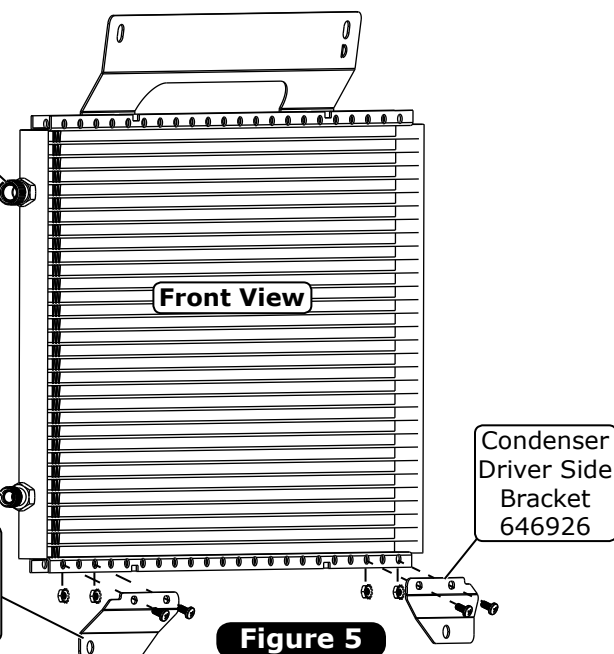


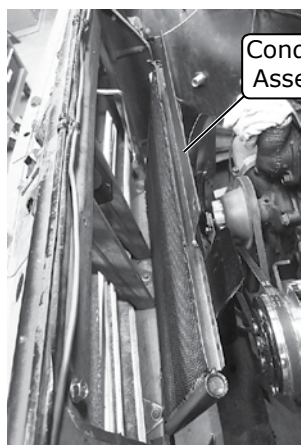
Figure 5



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## Condenser Assembly and Hardline Installation

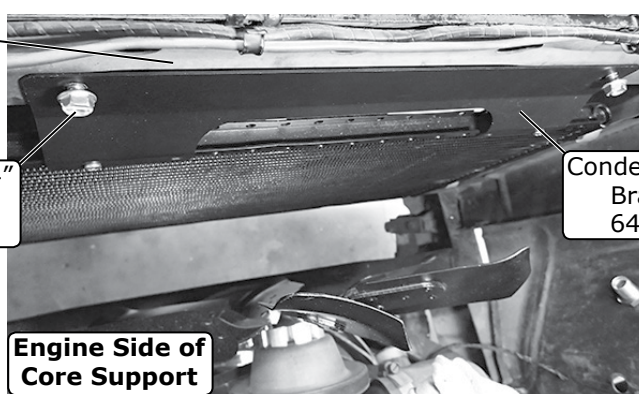
1. Secure the condenser top bracket into OEM holes on the engine side of the core support using (2) 5/16-18 x 3/4" self-tapping screws (See Photos 32 and 33, below).
2. Secure the condenser driver and passenger side brackets to the front side of the core support using (2) 1/4-20 x 3/4" hex bolts, (4) 1/4" flat washers and (2) 1/4-20 nuts with star washers (See Photos 34 and 35, and Figure 6, 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 3, Page 13). Install the #6 condenser/drier hardline onto the #6 condenser fitting (See Photo 36, below).
4. Secure and tighten both ends of the #6 condenser/drier hardline (See Figure 3, Page 13). 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

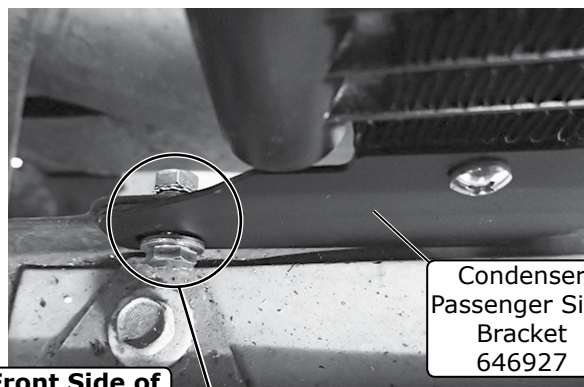


Engine Side of Core Support

Condenser Top Bracket 646928

Photo 32

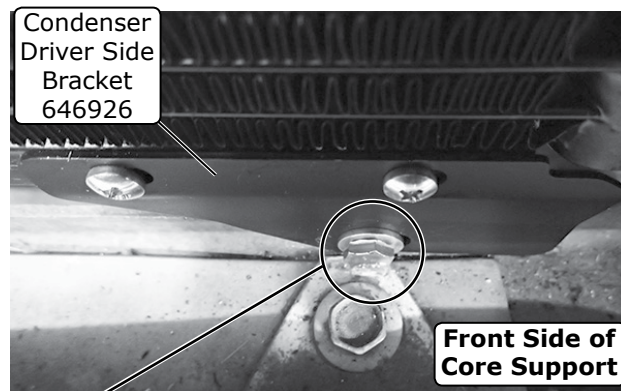
Photo 33



Front Side of Core Support

Condenser Passenger Side Bracket 646927

Photo 34



Condenser Driver Side Bracket 646926

Front Side of Core Support

Photo 35

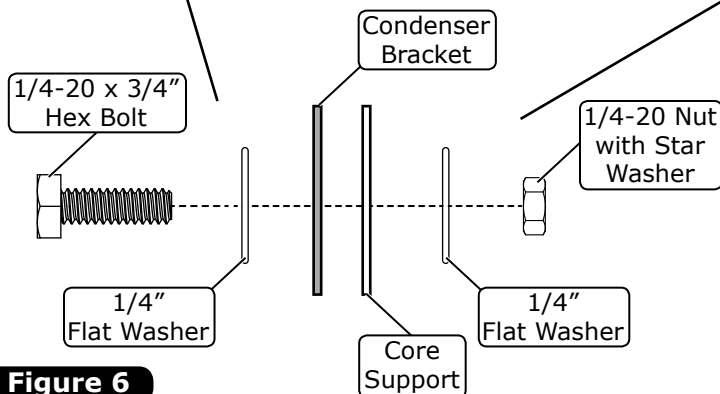
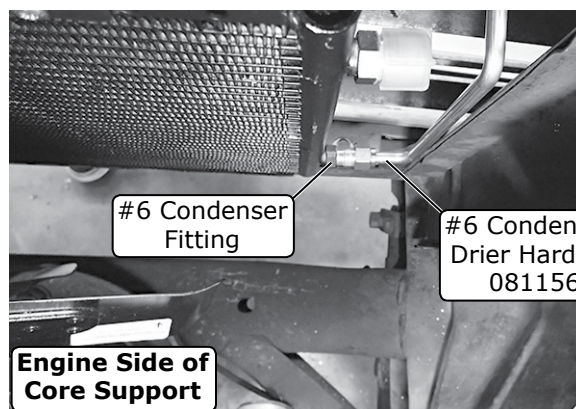


Figure 6



Engine Side of Core Support

#6 Condenser Fitting

#6 Condenser/Drier Hardline 081156

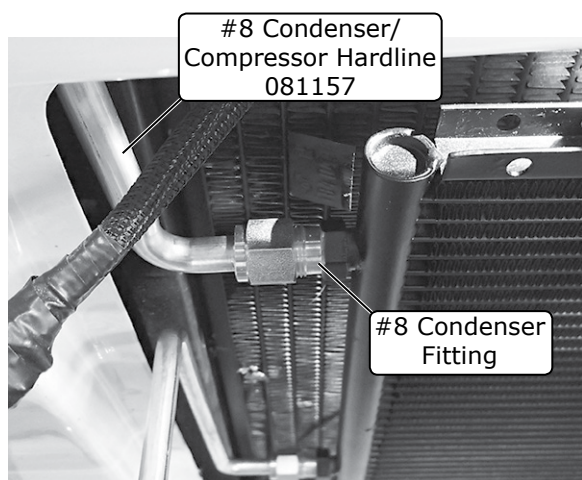
Photo 36



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## Condenser Assembly and Hardline Installation (Cont.)

1. Insert the radiator from the top of the core support. **NOTE: Do not secure the radiator at this time.**
2. Lubricate and install a #8 O-ring onto the #8 condenser/compressor hardline (See Figure 3, Page 13). Install the #8 condenser/compressor hardline onto the #8 condenser fitting (See Photo 37, below, and Figure 3, Page 13).
3. 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 38, below).
4. Secure the #8 condenser/compressor hardline to the #8 hardline support bracket using a #4 Adel clamp, a 10-24 x 3/8" pan head screw and a 10-24 nut with star washer (See Photo 38, and Figure 7, 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 39, below).**



Front Side of Core Support

Photo 37

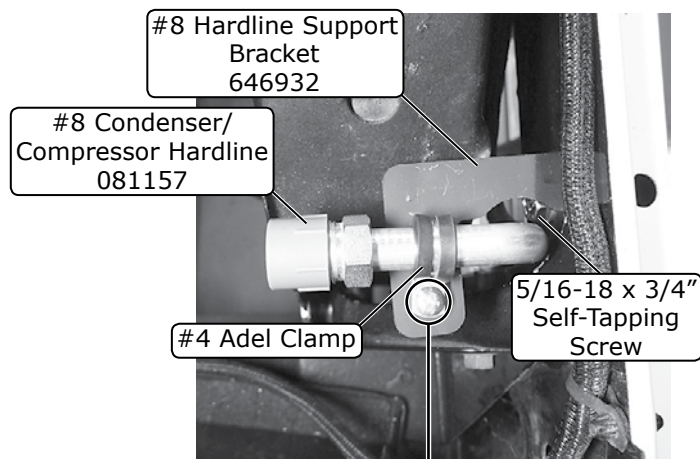


Photo 38



Support Brace

Support Brace Bolt

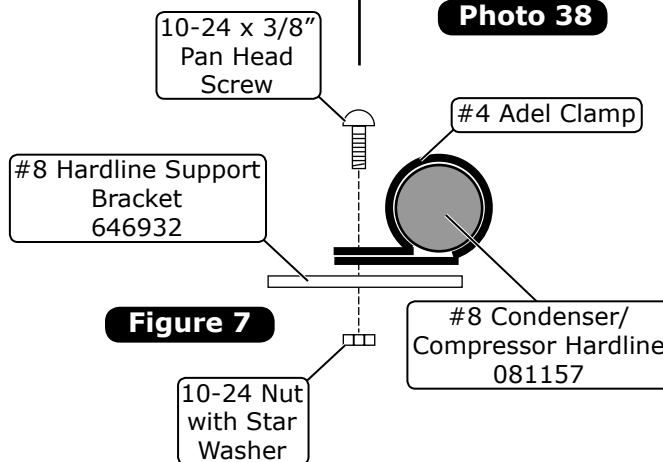


Figure 7

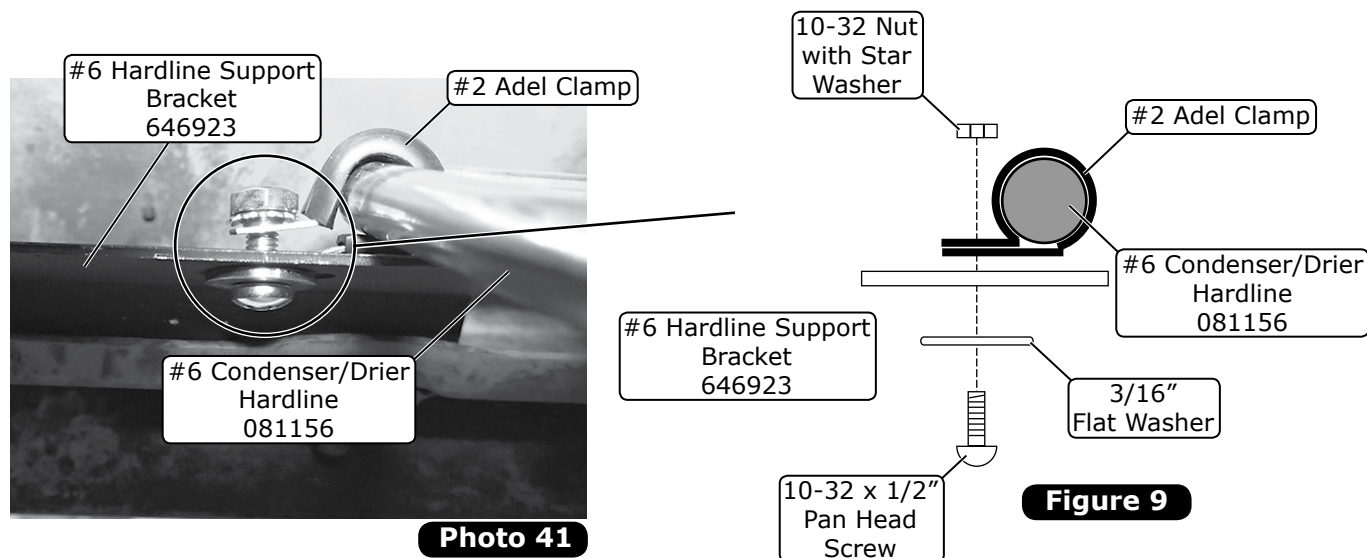
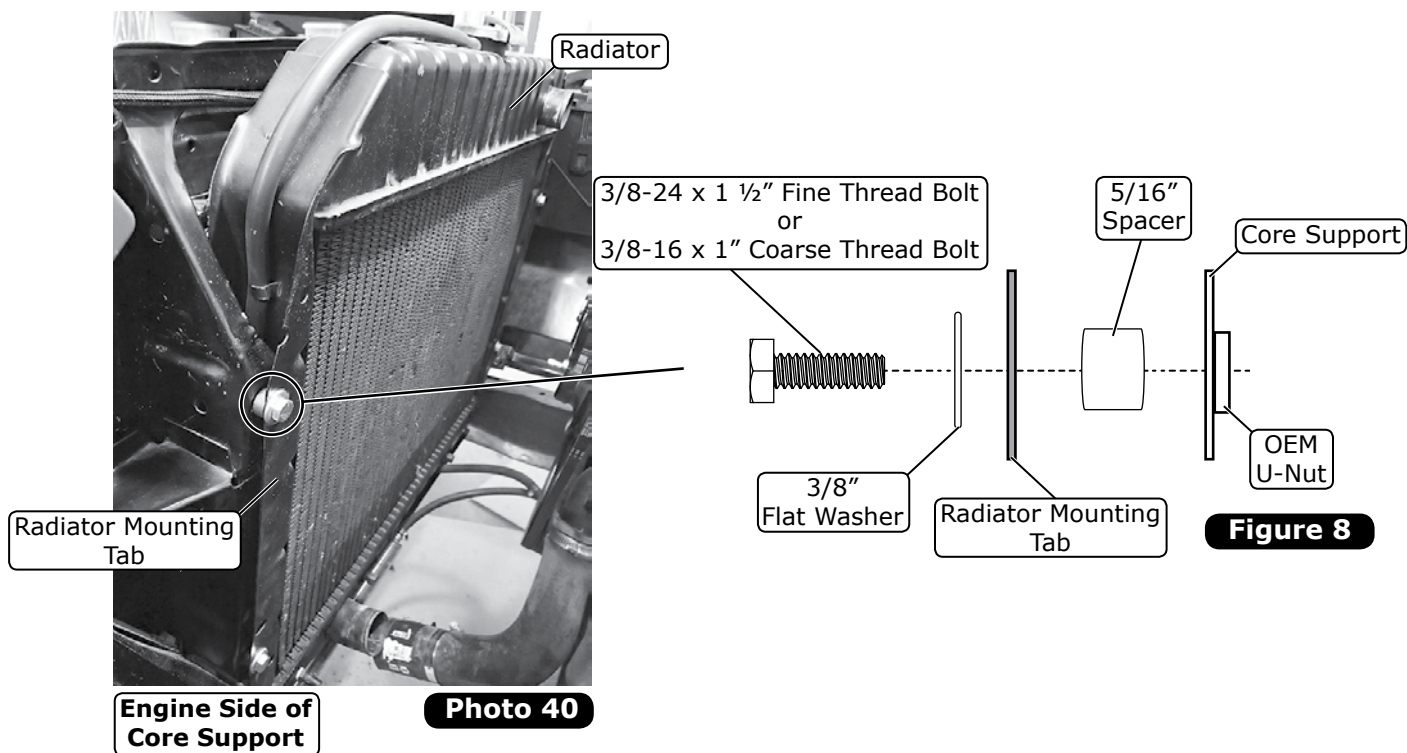
Photo 39



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## Condenser Assembly and Hardline Installation (Final)

1. Secure the radiator to the core support using (4) 3/8" bolts\*, (4) 5/16" spacers and (4) 3/8" flat washers (See Photo 40 and Figure 8, 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.**
2. Install a #2 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 41, and Figure 9, below).
3. Reinstall and/or reconnect all remaining items removed or disconnected in the Engine Compartment Disassembly instructions on Page 7. This concludes the condenser kit portion of your installation.





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## Packing List: Condenser Kit (011150)

No.	Qty.	Part No.	Description	
1.	1	03767-VUC	Condenser, 14" x 24", Parallel Flow	_____
2.	1	07321-VUC	Drier	_____
3.	1	11079-VUS	Binary Switch, Male	_____
4.	1	23135-VUW	Compressor Lead	_____
5.	1	646917	Wrench	_____
6.	1	646922	Template, Core Support Hardline Register (1961-64 Models)	_____
7.	1	646923	Bracket, #6 Hardline Support	_____
8.	1	646925	Bracket, Drier Assembly	_____
9.	1	646926	Bracket, Condenser, Driver Side	_____
10.	1	646927	Bracket, Condenser, Passenger Side	_____
11.	1	646928	Bracket, Condenser, Top	_____
12.	1	646936	Bracket, Hood Latch Handle	_____
13.	1	646932	Bracket, #8 Hardline Support	_____
14.	1	081156	Hardline, #6 Condenser/Drier	_____
15.	1	081157	Hardline, #8 Condenser/Compressor	_____
16.	2	33857-VUF	O-ring, #6	_____
17.	1	33858-VUF	O-ring, #8	_____
18.	2	183814	Shoulder Bolt, 5/16" x 1/4" x 1/4-20	_____
19.	2	18544-WNS	Washer, 5/16", AN Flat	_____
20.	2	181490	Locknut, 1/4-20	_____
21.	5	18125-VUB	Washer, 1/4", Flat	_____
22.	3	18152-VUB	Nut, 1/4-20, with Star Washer	_____
23.	2	182871	Hex Bolt, 1/4-20 x 3/4"	_____
24.	3	182360	Screw, 5/16-18 x 3/4", Self-Tapping	_____
25.	4	180034	Spacer, .750" OD x .406" ID x .313 Length	_____
26.	4	18029-VUB	Washer, 3/8", Flat	_____
27.	4	18359-VUB	Hex Bolt, 3/8-16 x 1"	_____
28.	4	18042-VUB	Hex Bolt, 3/8-24 x 1 1/2"	_____
29.	1	18247-VUB	Screw, #10 x 1/2", Sheet Metal	_____
30.	9	18249-VUB	Screw, 10-24 x 3/8"	_____
31.	9	18260-VUB	Nut with Star Washer, 10-24	_____
32.	1	18123-VUB	Washer, 3/16" x 1/2", SAE Flat	_____
33.	1	18250-VUB	Screw, 10-32 x 1/2"	_____
34.	1	18251-VUB	Nut, 10-32	_____
35.	1	31600-VUD	Adel Clamp, #2	_____
36.	1	31603-VUD	Adel Clamp, #4	_____

Checked By: \_\_\_\_\_

Packed By: \_\_\_\_\_

Date: \_\_\_\_\_

**Refer to Packing List Illustrations, Page 4, for illustrations of parts listed above.**