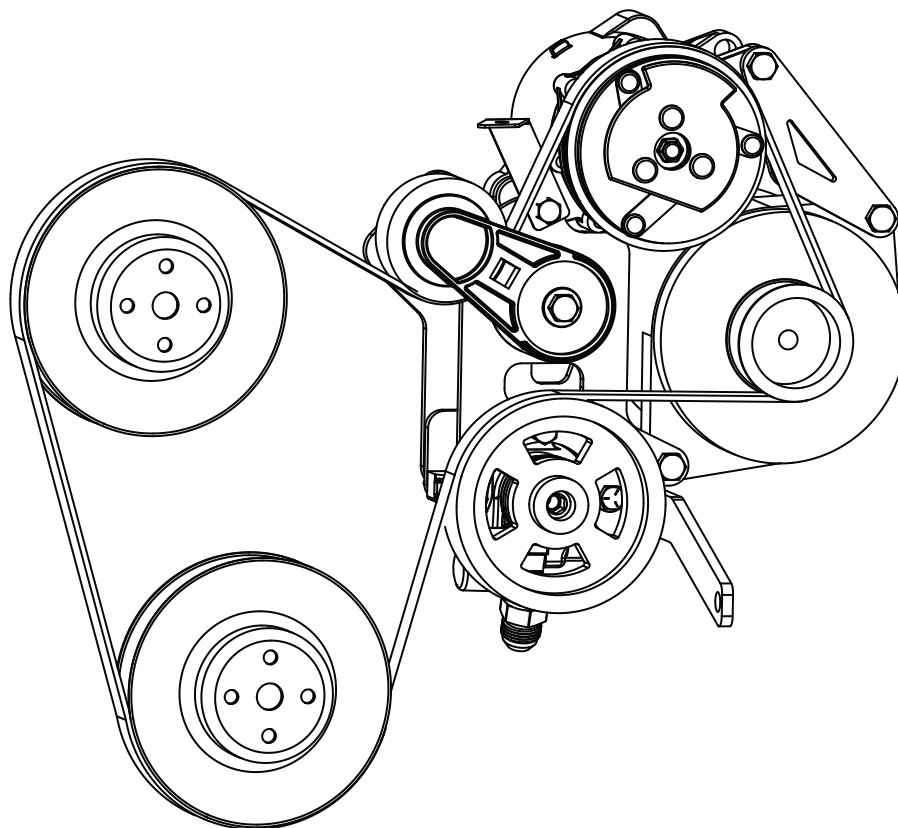




an ISO 9001:2015 Registered Company

1986-87 Turbo Buick 3.8

Compressor/Alternator/Power Steering
Bracket Kit
(151560)



18865 Goll St. San Antonio, TX 78266
Phone: 800-862-6658
Sales: sales@vintageair.com
Tech Support: tech@vintageair.com
www.vintageair.com



www.vintageair.com

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Additional Info: Please Read Before Beginning

- For proper alternator and compressor function, there must be a solid ground connection to the body of the accessories. This can be achieved by removing paint from the bracket to create a ground path or by adding a wire to directly ground the cases.
- Due to clocking of the power steering pump, new lines will need to be installed for the power steering. A power steering hose kit is available from Vintage Air - PN 852014. NAPA 73305 or Edelmann 81355 may be used for the return line.



A detailed tech video outlining the installation process is available on Vintage Air's YouTube channel at <https://bit.ly/3ELBsWu>. Viewing the tech video along with the written instructions will provide the installer the most detailed installation procedure.



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Packing List: Bracket Kit (151560)

No.	Qty.	Part No.	Description
1.	1	151561	Bracket, Assembly
2.	1	151568	Bracket, Arm
3.	1	151569	Bracket, Spacer
4.	1	39603-SCH	Tensioner, Belt
5.	1	191128	Hardware Kit

**** 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.**

1



2



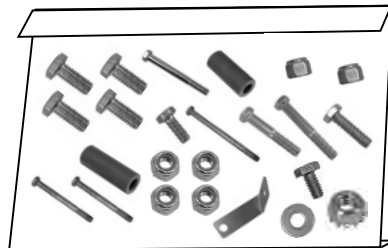
3



4



5



**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. (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.

Engine Disassembly

NOTE: The following steps cover removing what is necessary to replace the factory A/C compressor, alternator, and power steering pump. The factory power steering pump and alternator may be reused with this Vintage Air bracket kit.

1. Disconnect the battery, evacuate the A/C system, and drain the coolant.
2. Remove the electrical connections from the intake ducting (See Photos 1 and 2, below).
3. Remove the air-box bracket from the core support by removing the fastener (See Photo 3, below).
4. Remove (2) bolts from the bottom of the air-box going into the frame (See Photo 4, below).

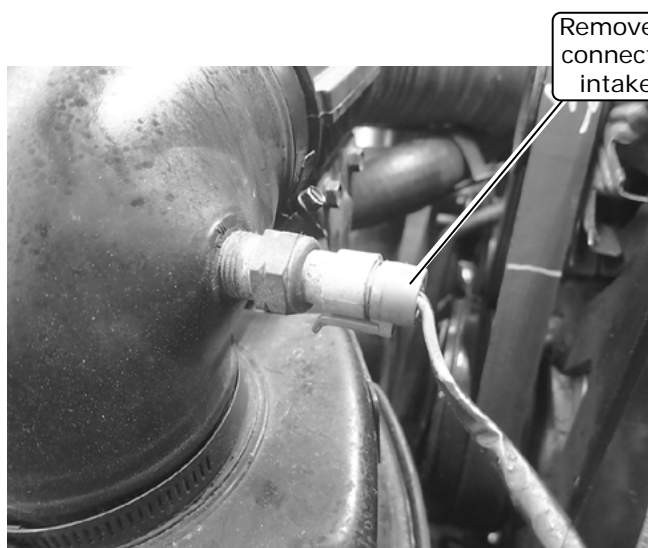


Photo 1

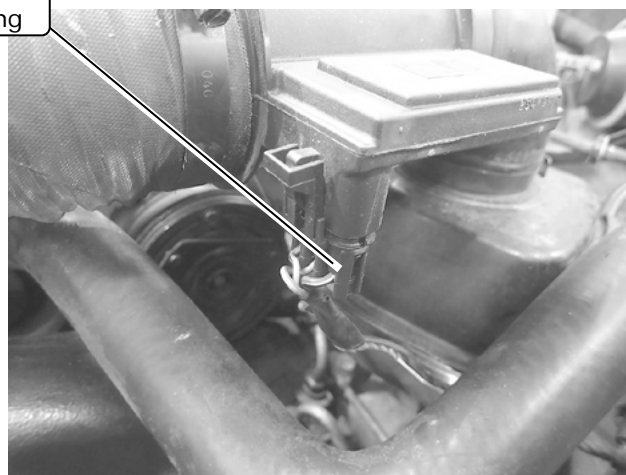


Photo 2



Photo 3

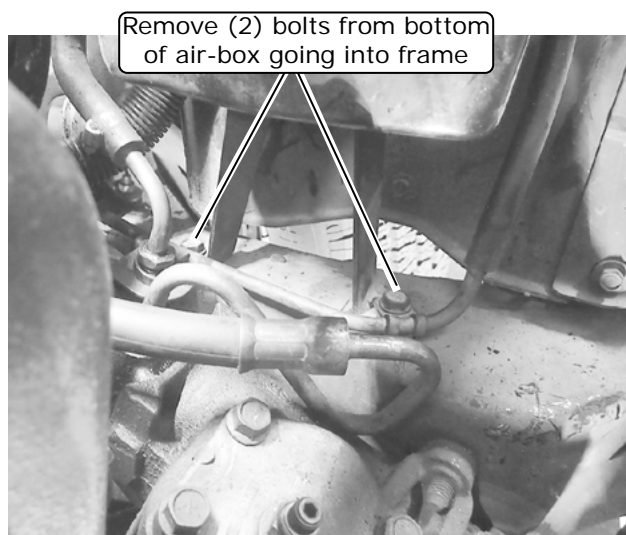


Photo 4

Engine Disassembly (Cont.)

5. Loosen the hose clamps (See Photos 5 and 6, below), then remove the air-box and flex hose.
6. From under the car, remove the nut from the engine stud (See Photo 7, below) securing the driver-side intercooler bracket.
7. While under the car, remove the bolt from the passenger-side intercooler bracket going into the frame (See Photo 8, below).

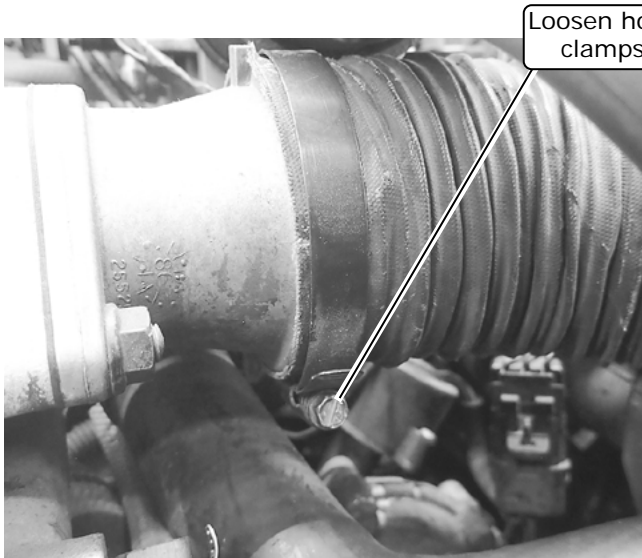


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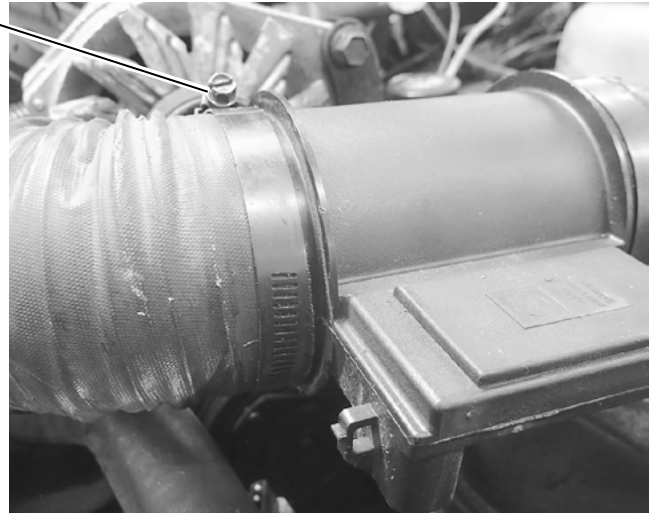


Photo 6

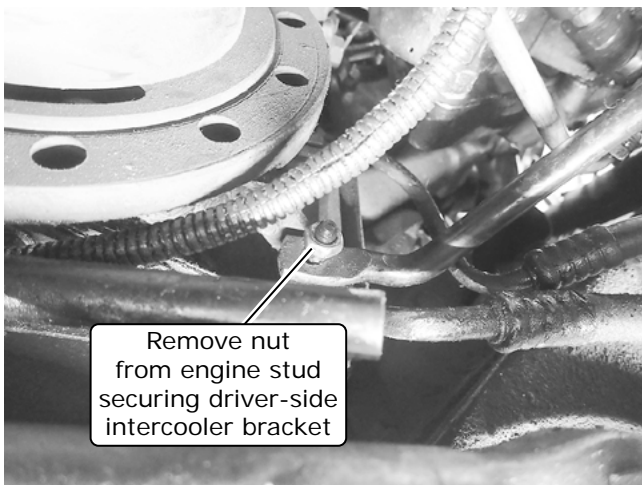


Photo 7

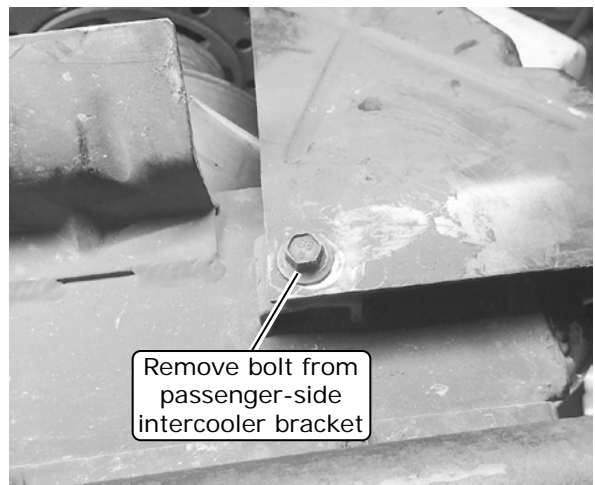


Photo 8

Engine Disassembly (Cont.)

8. From above or below, remove the (2) passenger-side intercooler bolts (See Photo 9, below) and (1) driver-side intercooler bolt (See Photo 10, below).
9. Remove the nut from the stud on the engine bracket assembly that secures the intercooler bracket and radiator hose (See Photo 10, below).
10. Loosen the hose clamps, then remove the upper radiator hose (See Photos 11 and 12, below).

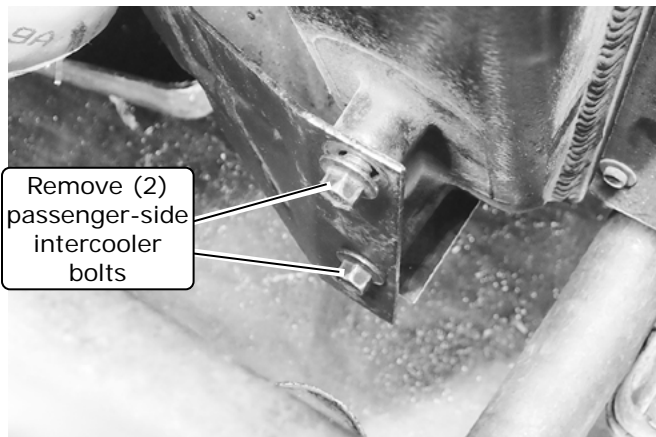


Photo 9

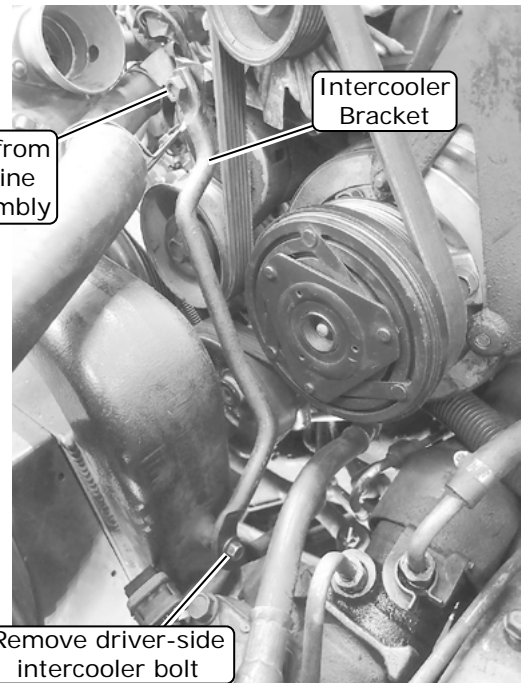


Photo 10



Photo 11

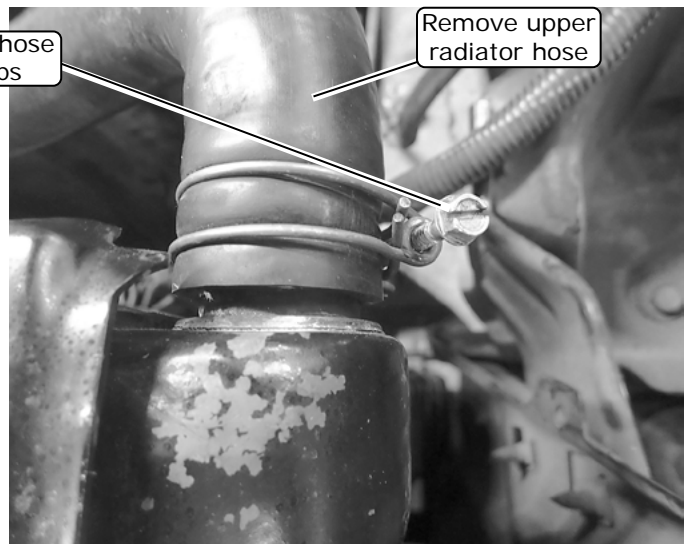


Photo 12

Engine Disassembly (Cont.)

11. Disconnect the electric fan connector (See Photo 13, below), then remove the (2) bottom fan bolts (See Photos 13 and 14, below).
12. Remove the (2) upper fan bolts, then remove the fan (See Photo 15, below).
13. Loosen the charge pipe hose clamps (See Photo 16, below), then remove the entire intercooler assembly with charge pipes. Remove the driver-side intercooler bracket.

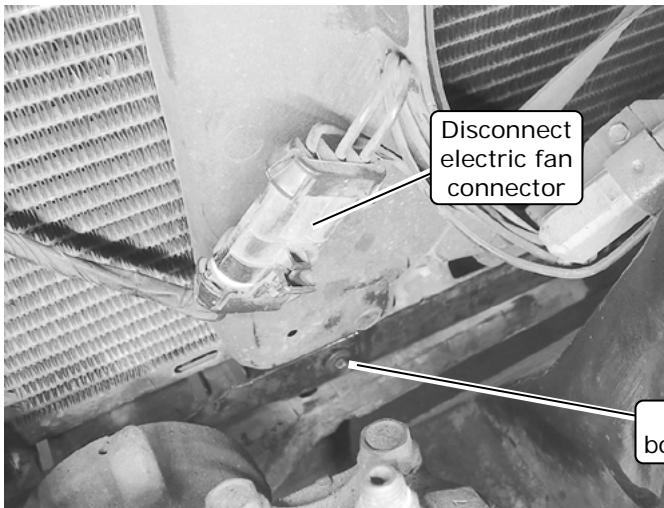


Photo 13

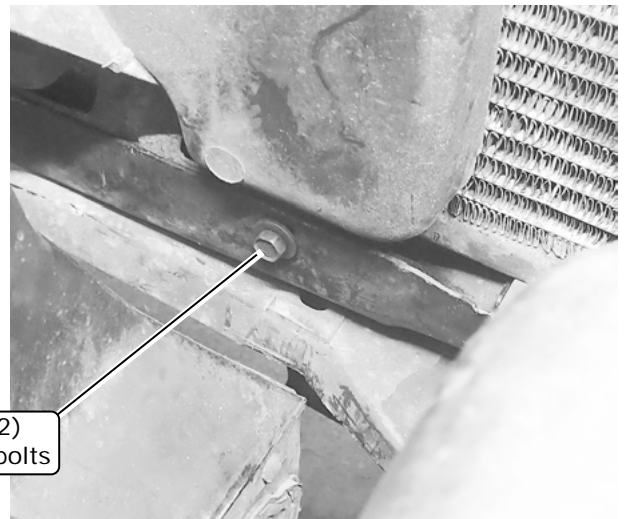


Photo 14

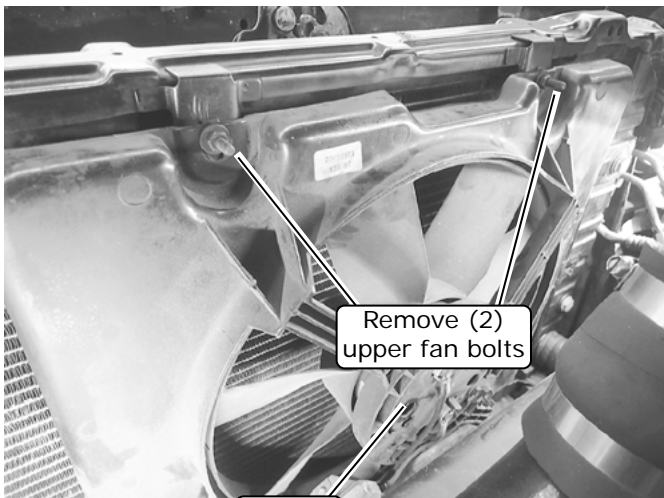


Photo 15

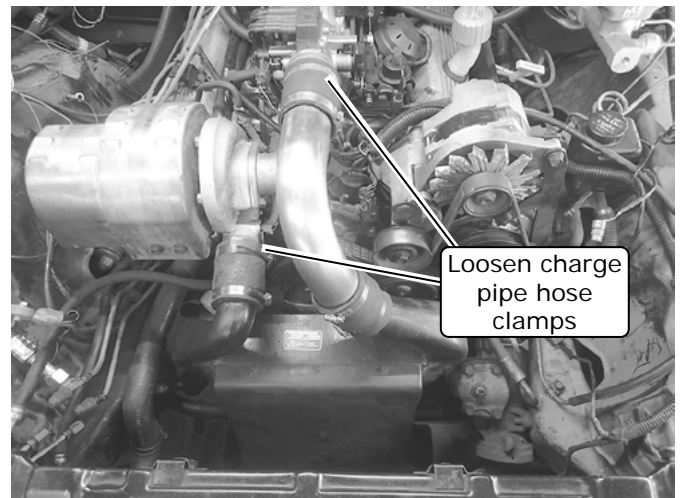
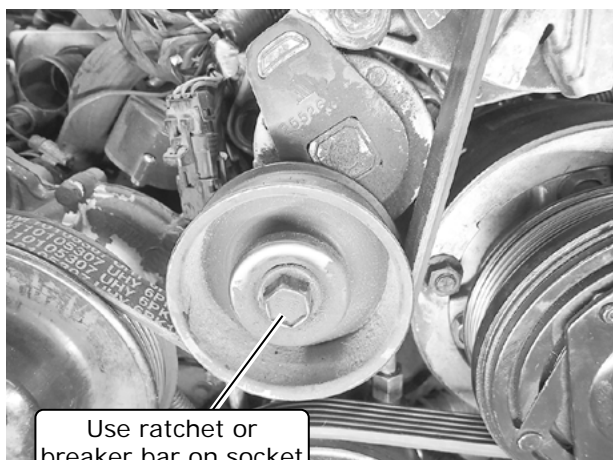


Photo 16

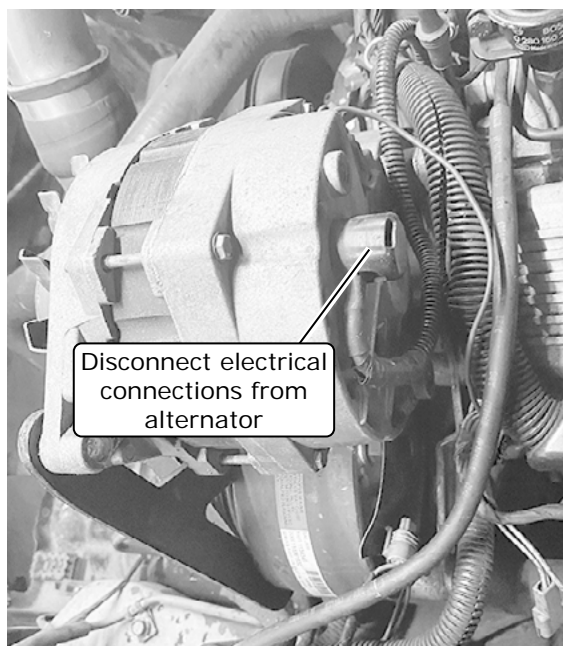
Engine Disassembly (Cont.)

14. Using a ratchet or breaker bar on the socket, rotate the automatic tensioner clockwise (See Photo 17, below) to release tension and remove the belt.
15. Disconnect the electrical connections from the alternator (See Photo 18, below) and compressor (See Photos 19 and 20, below).



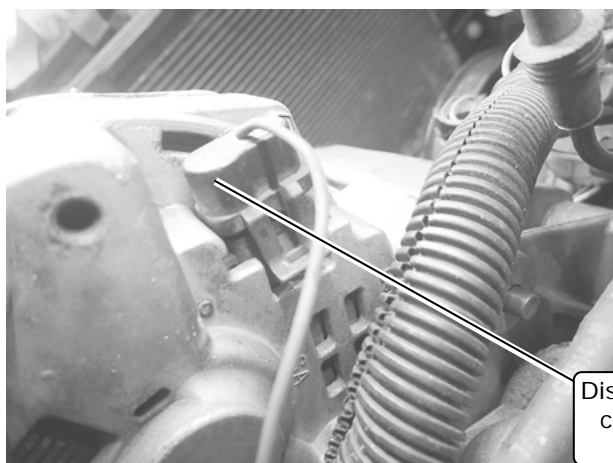
Use ratchet or
breaker bar on socket
to rotate clockwise

Photo 17



Disconnect electrical
connections from
alternator

Photo 18



Disconnect electrical
connections from
compressor

Photo 19

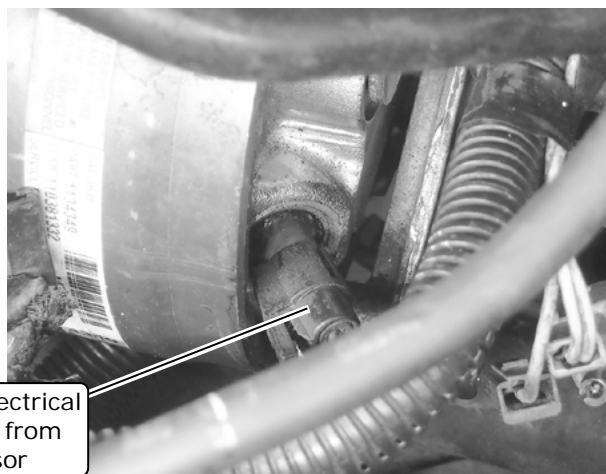


Photo 20

Engine Disassembly (Cont.)

16. Remove (2) bolts and a nut from the rear support bracket (See Photo 21, below).
17. Remove the bolt from the lower rear support bracket that secures the compressor (See Photo 22, below).
18. Remove the upper alternator nut and bolt from the bracket (See Photo 23, below).
19. Remove the stud from the idler assembly that holds the alternator, then remove the alternator (See Photo 24, below).

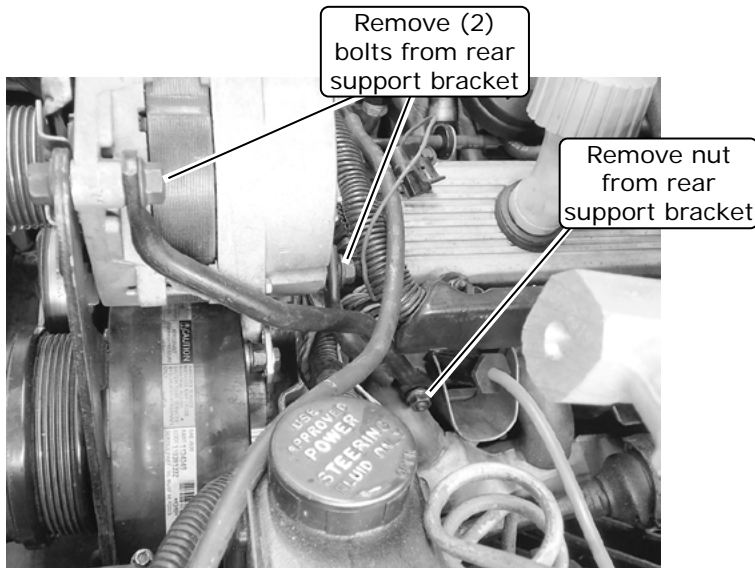


Photo 21

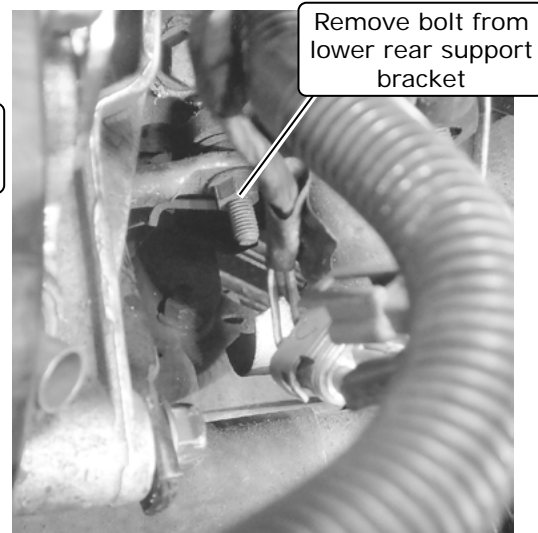


Photo 22

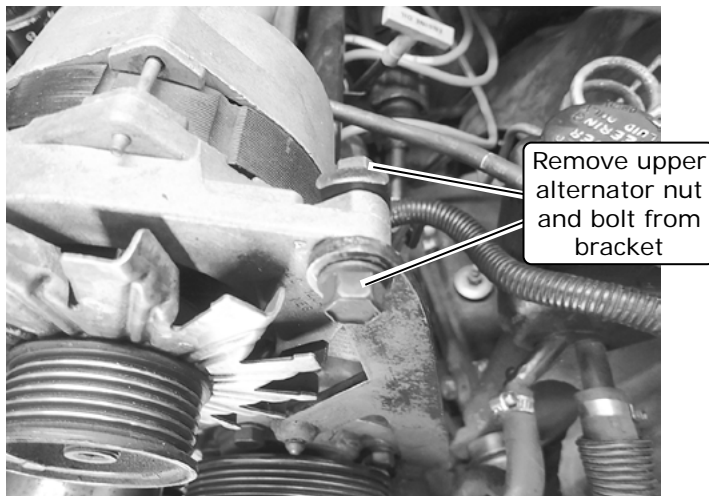


Photo 23

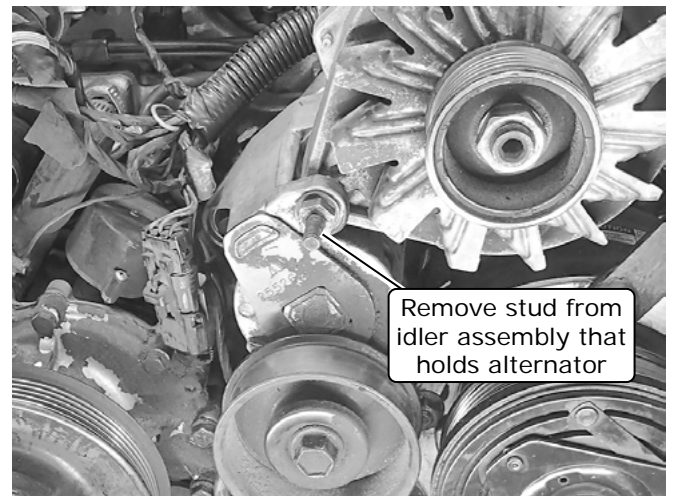


Photo 24

Engine Disassembly (Final)

20. Remove the (2) bolts holding the automatic tensioner (See Photo 25, below).
21. Remove the nut from the stud holding the compressor (See Photo 26, below). Slide the compressor and the upper bracket off the stud.
22. Disconnect and remove the power steering pressure and return line from the pump (See Photo 27, below).
23. Remove the (2) remaining bolts from the bracket assembly (See Photo 28, below), then remove the bracket.
24. Loosen the nut on the exhaust manifold stud and remove the lower rear support bracket (See Photo 29, below).

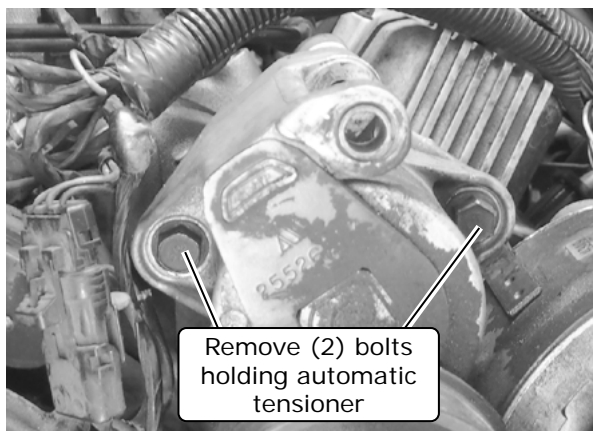


Photo 25

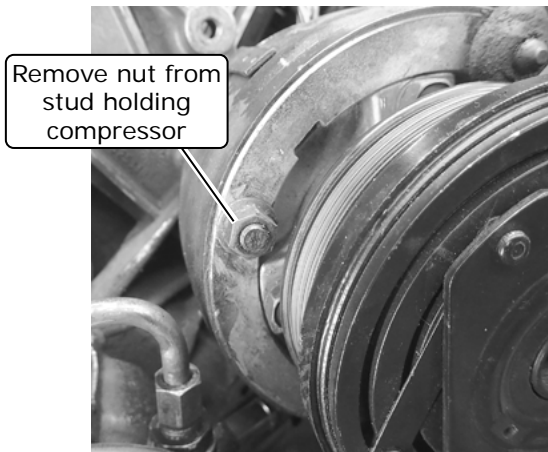


Photo 26

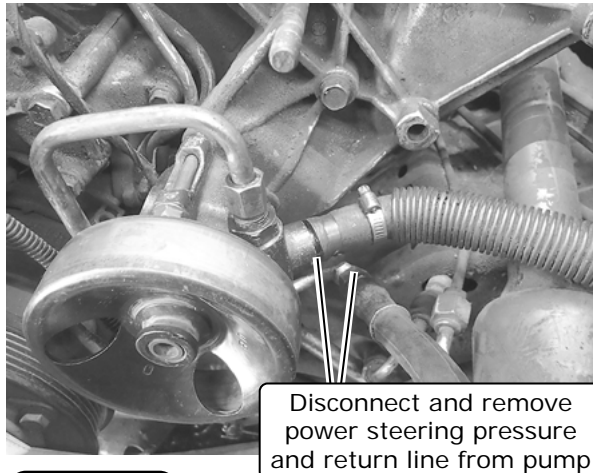


Photo 27

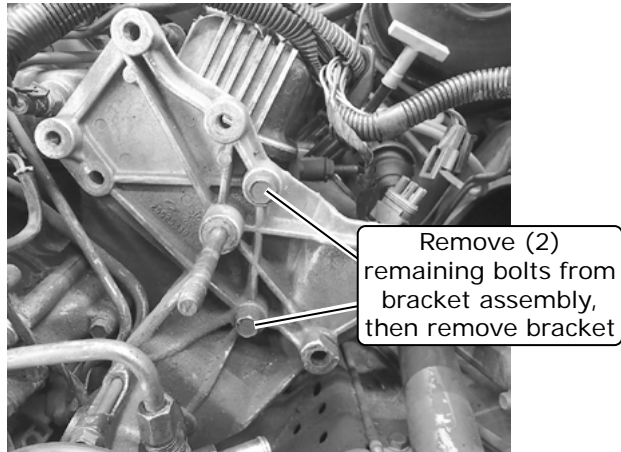


Photo 28

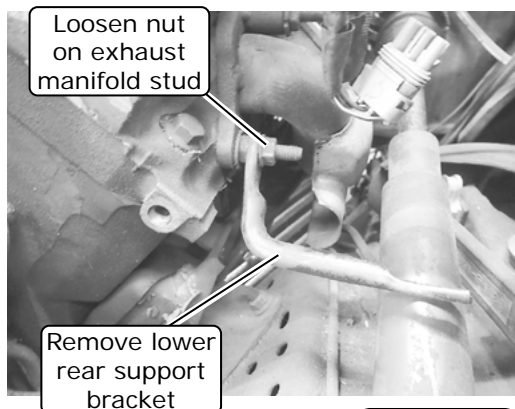


Photo 29

Compressor, Alternator and Power Steering Bracket Installation

1. Using an M10 x 1.5 x 25mm hex bolt, attach the alternator to the bracket assembly via the large threaded boss on the alternator (See Photos 1 and 2, below).
2. Secure the lower alternator mount to the bracket assembly using a 3/8-16 x 3 1/2" hex bolt, .750" OD x .406" ID x 1.750" length spacer and a 3/8-16 locknut (See Photo 3, below).
3. Place the spacer bracket on top of the power steering mounting bosses, with the return line pointing down, as shown in Photo 4, below.

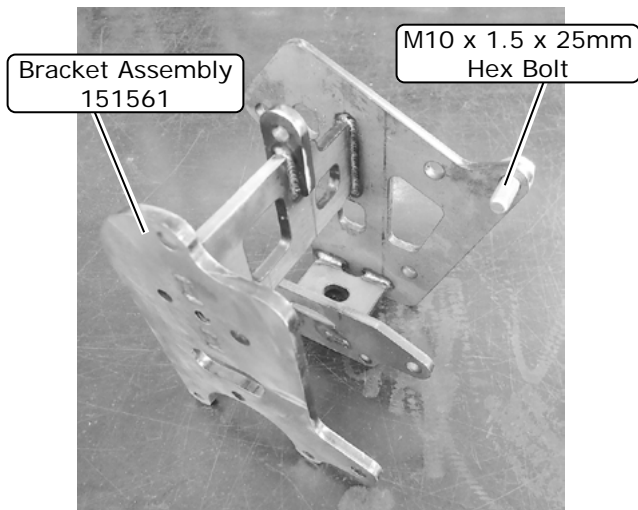


Photo 1

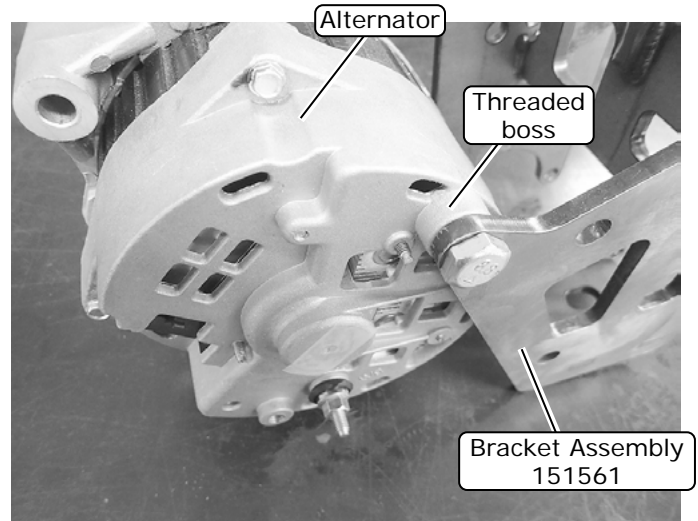


Photo 2

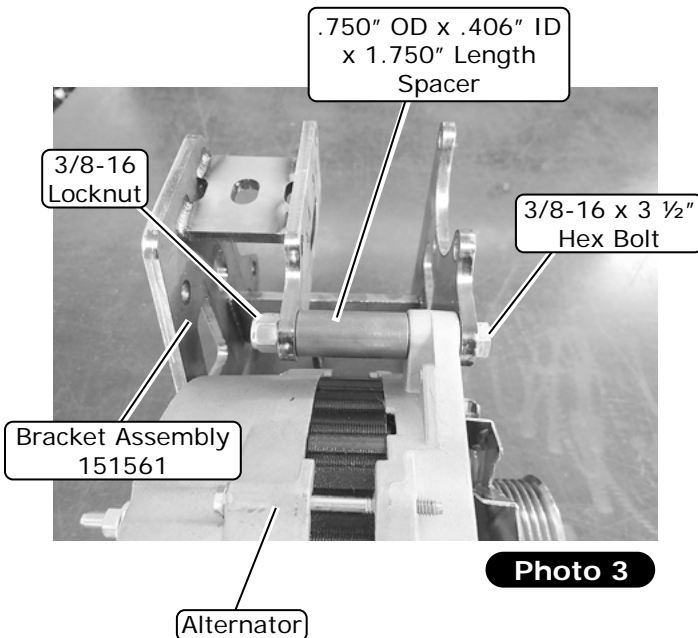


Photo 3

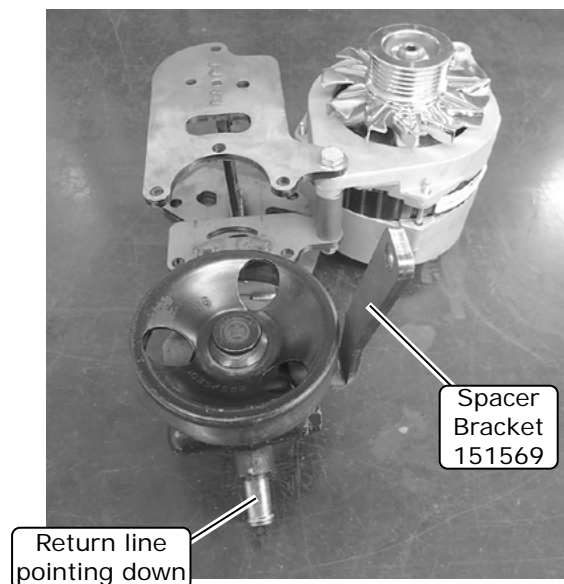


Photo 4

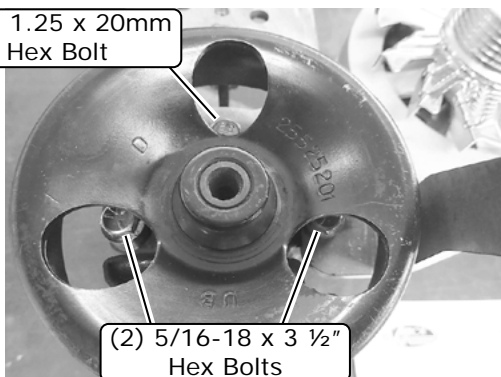
Compressor, Alternator and Power Steering Bracket Installation (Cont.)

4. Place the spacer bracket and the power steering pump inside the bracket assembly. Secure the power steering pump to the bracket assembly using (2) 5/16-18 x 3 1/2" hex bolts, (2) 5/16-18 locknuts on the left and right holes, and a M8 x 1.25 x 20mm hex bolt into the center threaded boss (See Photos 5 and 6, below).
5. Tighten all (3) power steering bolts, then tighten both alternator bolts.
6. The bracket assembly is now ready to be installed onto the engine head (See Photo 7, below).

NOTE: For ease of installation, an M10 x 1.5 stud (not included) can be used in the head's threaded boss to help support the weight of the bracket (See Photos 8 and 9, below). Alternatively, the bracket can be installed on the head before any accessories are attached, but is not recommended.

7. Install the bracket assembly onto the engine head using (3) M10 x 1.5 x 25mm hex bolts (See Photo 10, below).

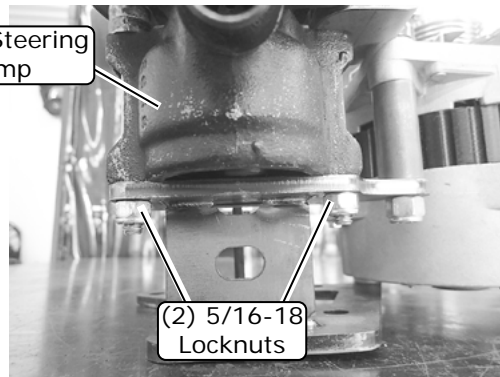
M8 x 1.25 x 20mm
Hex Bolt



(2) 5/16-18 x 3 1/2"
Hex Bolts

Photo 5

Power Steering
Pump



(2) 5/16-18
Locknuts

Photo 6

Bracket assembly
ready to install

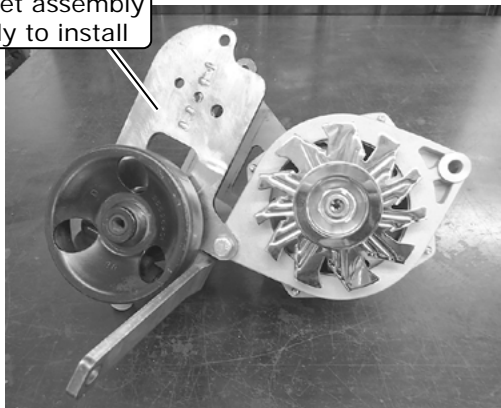


Photo 7



M10 x 1.5 stud can be
used in head's threaded
boss to help support
weight of bracket

Photo 8

Bracket assembly
hung on stud

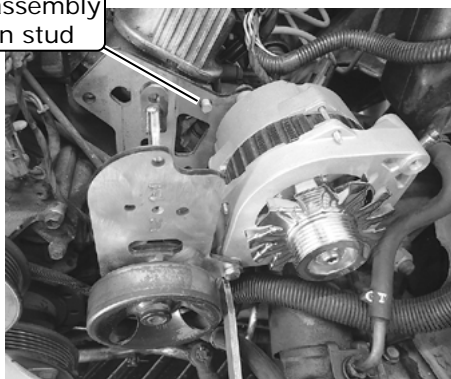
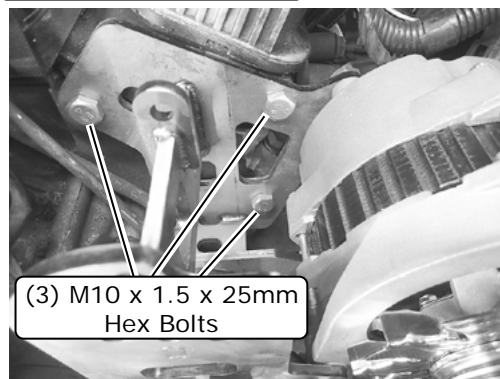


Photo 9



(3) M10 x 1.5 x 25mm
Hex Bolts

Photo 10

Compressor, Alternator and Power Steering Bracket Installation (Cont.)

8. Place the compressor onto the bracket assembly, and secure the front of the compressor ear to the backside of the front bracket using a 5/16-18 x 4 ½" hex bolt, .750" OD x .406" ID x 2.000" length spacer, and a 5/16-18 locknut as shown in Photos 11 and 12, below.
9. At this time, the optional radiator hose support bracket may be installed in front of the bracket assembly (See Photo 13, below).
10. Using the larger hole on the bracket, install the arm bracket onto the outer alternator ear using a 3/8-16 x 2 ¾" hex bolt and a 3/8-16 locknut as shown in Photo 14, below.
11. Secure the smaller hole of the arm bracket to the compressor ear using a 5/16-18 x 1 ¼" hex bolt and a 5/16-18 locknut (See Photo 15, below).
12. Tighten the bolts that secure the arm bracket to the compressor and alternator.

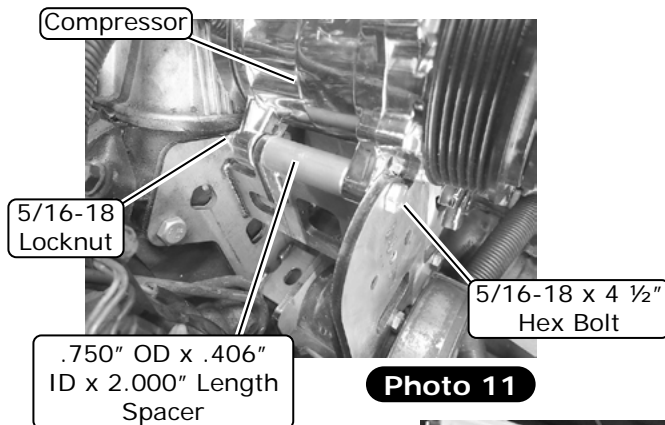


Photo 11

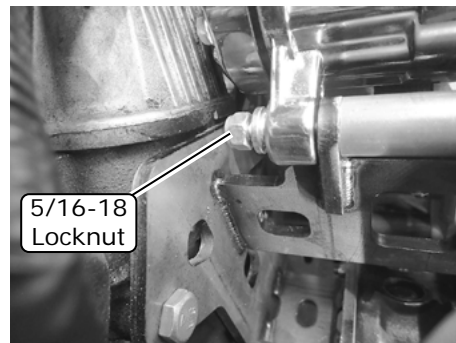


Photo 12

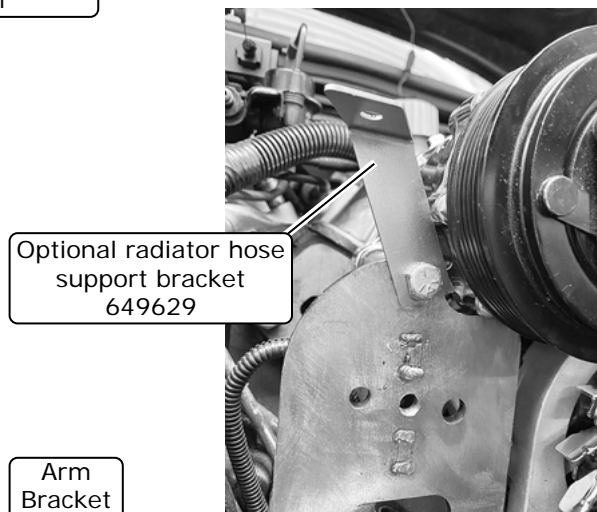


Photo 13

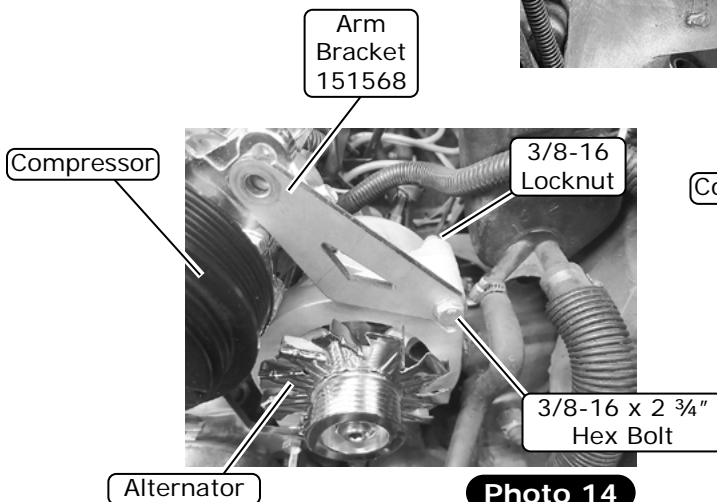


Photo 14

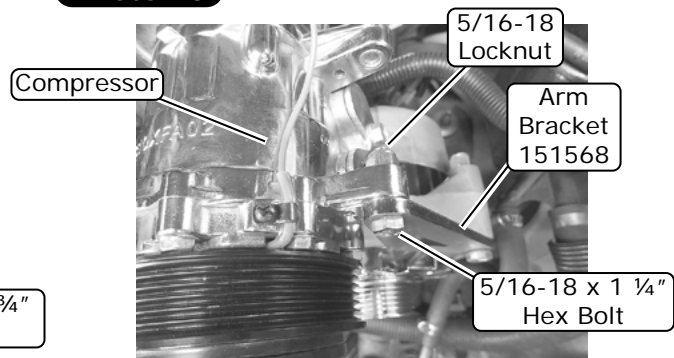


Photo 15

Compressor, Alternator and Power Steering Bracket Installation (Cont.)

13. Install the belt tensioner into the threaded boss on the bracket assembly using a 3/8-16 x 2 1/4" hex bolt and a 3/8" flat washer as shown in Photos 16 and 17, below.
14. Install the electrical connections onto the alternator (See Photo 18, below).
15. Install the power steering hoses to the power steering pump.
16. Install the serpentine belt. A Gates K060578 13/16 x 58 3/8" Micro-V belt was used for this installation. Follow the belt routing diagram on Page 17, and place the belt over all the pulleys except the power steering pulley. Using a 1/2" drive ratchet or breaker-bar, rotate the automatic tensioner clockwise and slip the belt over the power steering pulley (See Photos 19 and 20, below).
17. Install the intercooler, piping, and electrical connections.
18. Secure the intercooler to the spacer bracket and the OEM passenger-side bracket using the original hardware (See Photo 21, below).

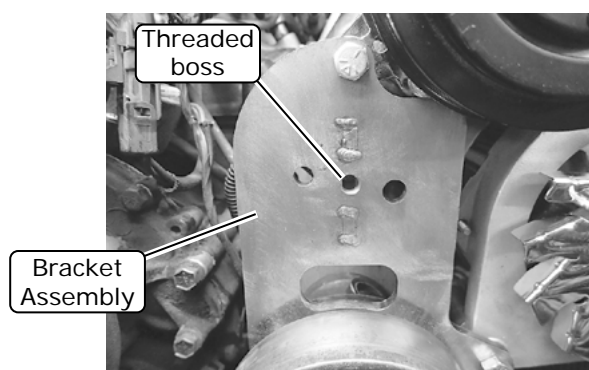


Photo 16

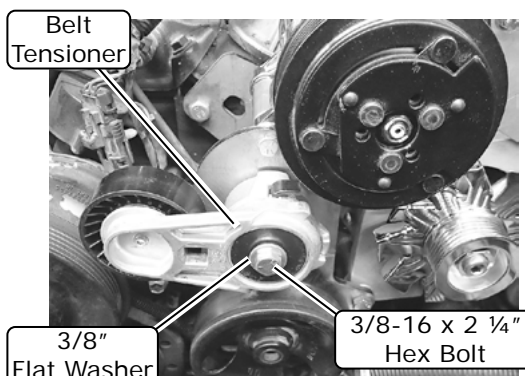


Photo 17

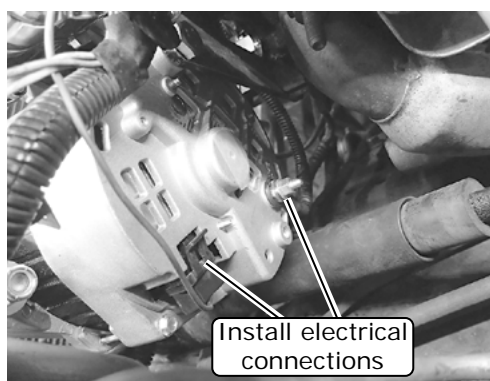


Photo 18

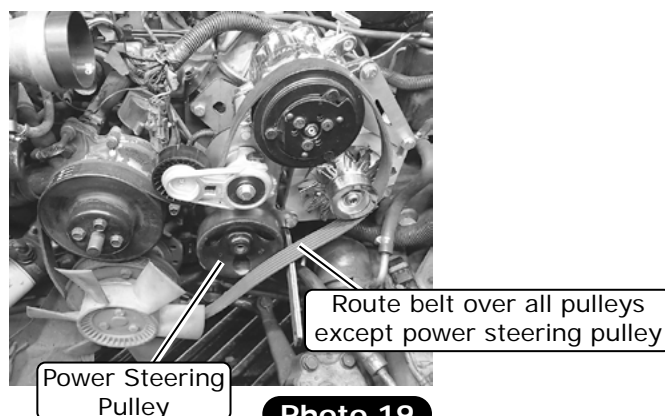


Photo 19



Photo 20

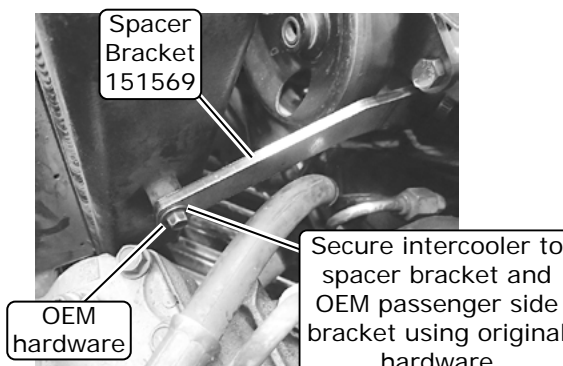


Photo 21



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Compressor, Alternator and Power Steering Bracket Installation (Final)

19. The upper radiator hose may be secured to the radiator hose support bracket using a 1/4-20 x 1/2" hex bolt and a 1/4-20 hex nut with star washer. **NOTE: The OEM radiator hose bracket will need to be flattened out to mount to the provided radiator hose support bracket (See Photo 22, below).**
20. Refill the coolant and power steering fluid following the manufacturer's guidelines for priming systems.
21. Reconnect the battery.

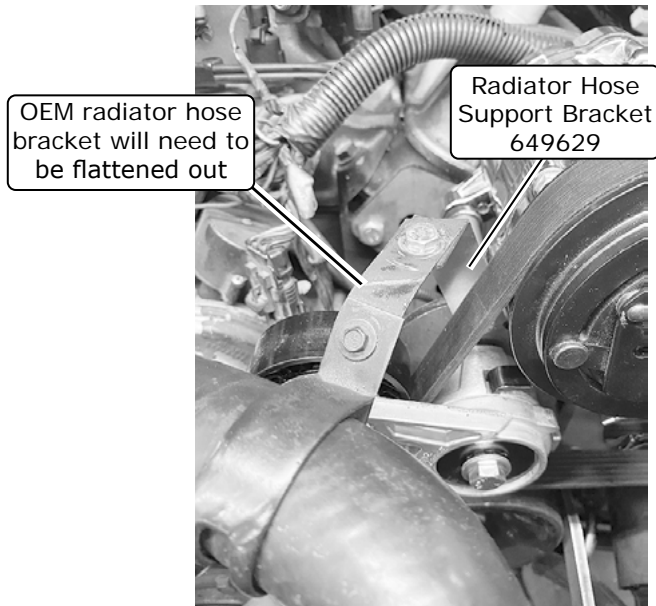
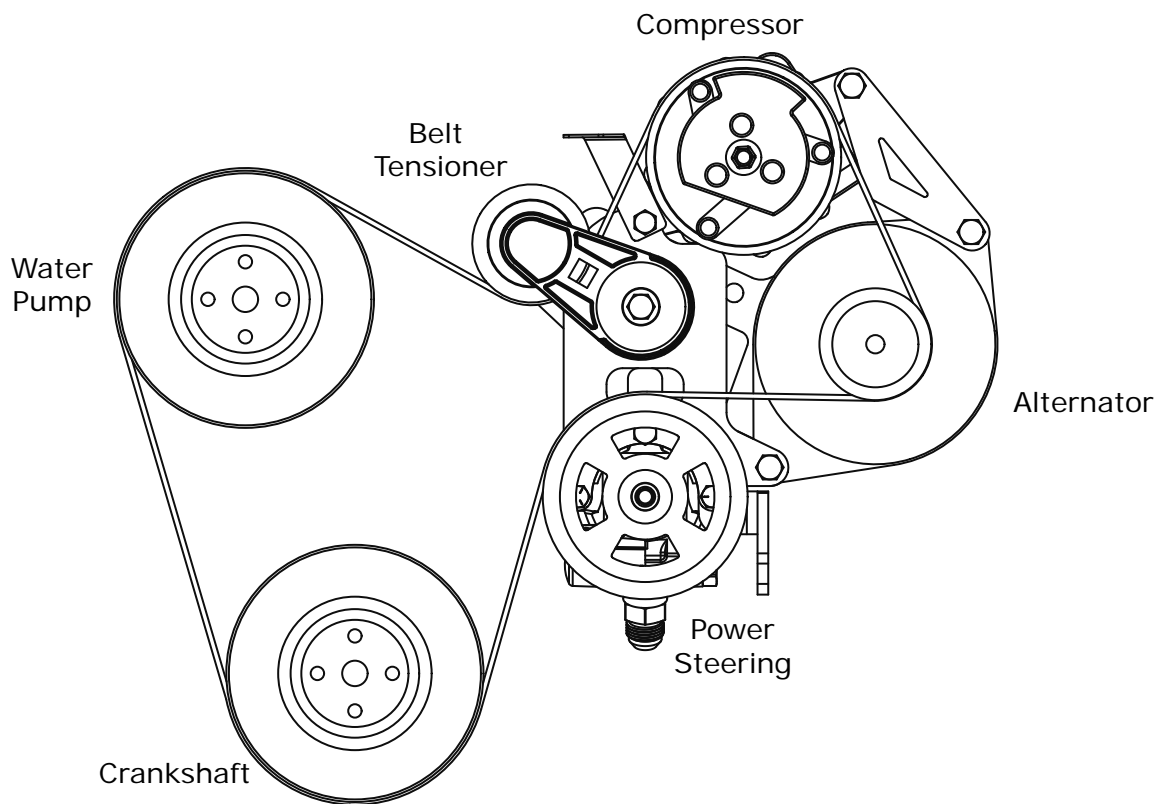


Photo 22

Serpentine Belt Routing Diagram





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Packing List: Bracket Kit (151560)

No.	Qty.	Part No.	Description	
1.	1	151561	Bracket, Assembly	_____
2.	1	151568	Bracket, Arm	_____
3.	1	151569	Bracket, Spacer	_____
4.	1	39603-SCH	Tensioner, Belt	_____
5.	1	191128	Hardware Kit	_____

Checked By: _____
Packed By: _____
Date: _____

1



2



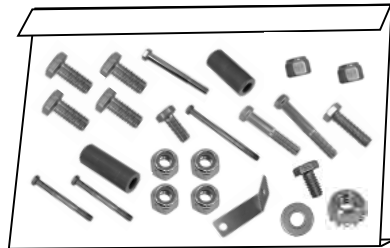
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4



5

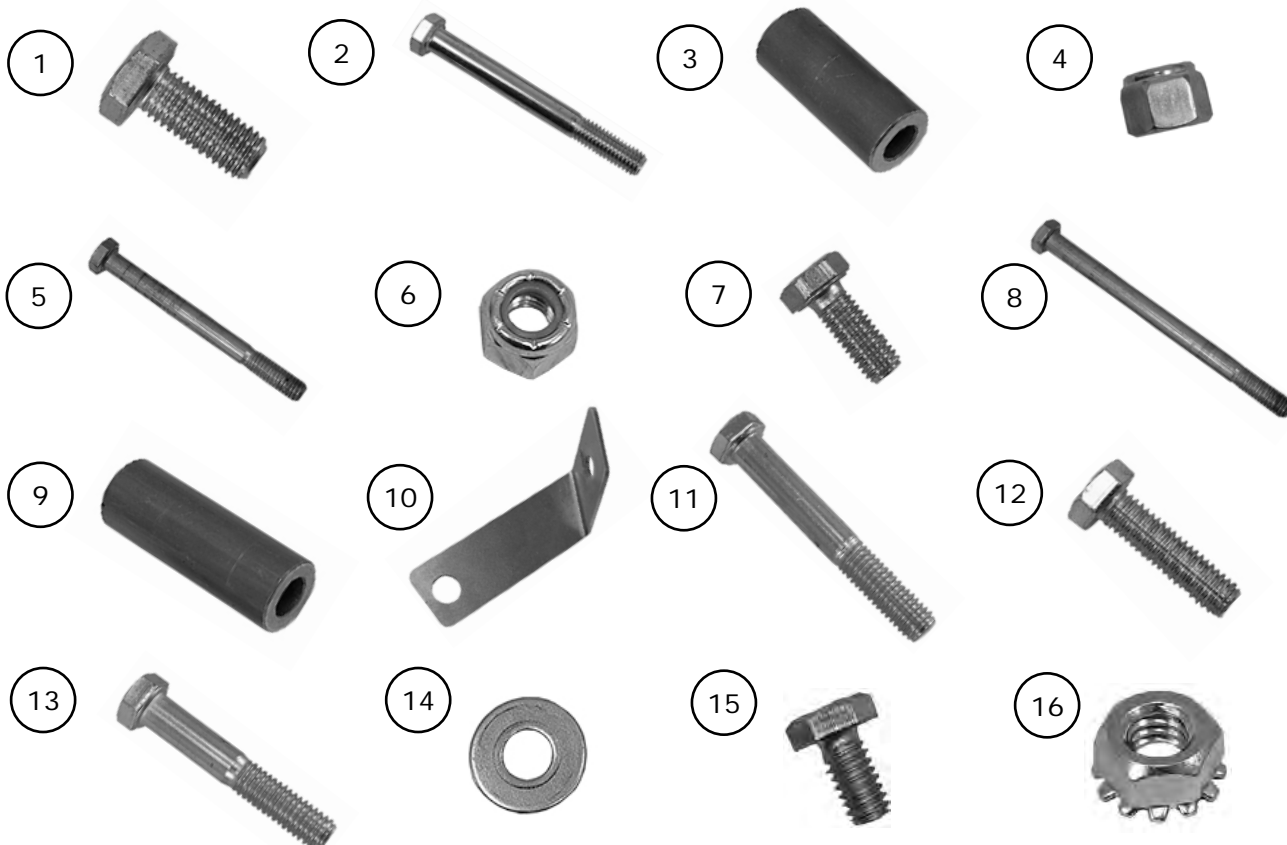


NOTE: Images may not depict actual parts and quantities.
Refer to packing list for actual parts and quantities.

Packing List: 1986-87 Turbo Buick 3.8 Compressor/Alternator/ Power Steering Bracket Hardware Kit (191128)

No.	Qty.	Part No.	Description	
1.	4	184026	Bolt, M10 x 1.5 x 25mm, Hex	_____
2.	1	18369-BHA	Bolt, 3/8-16 x 3 1/2", Hex	_____
3.	1	182144	Spacer, .750" OD x .406" ID x 1.750" Length	_____
4.	2	18155-VUB	Locknut, 3/8-16	_____
5.	2	181553	Bolt, 5/16-18 x 3 1/2", Hex	_____
6.	4	18151-VUB	Locknut, 5/16-18	_____
7.	1	185005	Bolt, M8 x 1.25 x 20mm, Hex	_____
8.	1	183180	Bolt, 5/16-18 x 4 1/2", Hex	_____
9.	1	18024-VUB	Spacer, .750" OD x .406" ID x 2.000" Length	_____
10.	1	649629	Bracket, Radiator Hose Support	_____
11.	1	18367-VUB	Bolt, 3/8-16 x 2 3/4", Hex	_____
12.	1	183009-DSR	Bolt, 5/16-18 x 1 1/4", Hex	_____
13.	1	18365-VUB	Bolt, 3/8-16 x 2 1/4", Hex	_____
14.	1	18029-VUB	Washer, 3/8", Flat	_____
15.	1	18287-VUB	Bolt, 1/4-20 x 1/2", Hex	_____
16.	1	18152-VUB	Nut with Star Washer, 1/4-20, Hex	_____

Checked By: _____
Packed By: _____
Date: _____



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