

**Gen IV (Black) 3.4L V6 Supercharger
4Runner (1996-2002)
T100 (1997-1998)
Tacoma (1997-2004)
Tundra (2000-2004)**

SUPERCHARGER DRIVE ASSEMBLY REPLACEMENT

Part Number: PTR29-35042

Section I – Installation Preparation

Kit Contents

Item #	Quantity Reqd.	Description
1	1 bottle	Gear lube (120 ml)
2	1	Fill nozzle
3	1	Drive assembly
4	1	Phenolic drive adaptor
5	1	Fill plug
6	1 tube	Loctite Gasket Eliminator

Additional Items Required For Installation

Item #	Quantity Reqd.	Description

Conflicts

Note:

Tools Required

Safety Tools	
Special Tools	
Installation Tools	

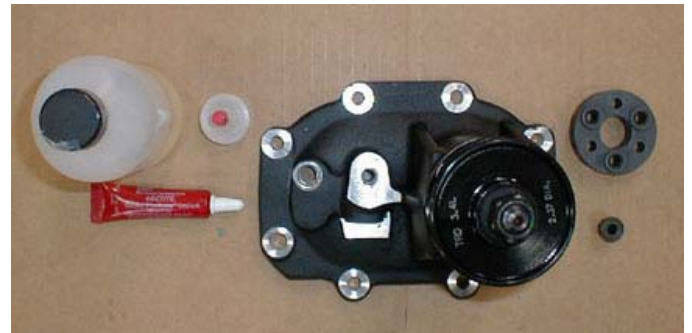


Figure 1

General Applicability

Gen. IV (Black) 3.4L V6 superchargers

Notes and Recommendations

<ol style="list-style-type: none"> 1. Read through the entire instruction set before beginning work. 2. Let the engine cool completely. 3. Clean the area around the supercharger to prevent any contamination during removal. Use compressed air to remove dirt from the engine valley. 4. The procedure takes about 4 hours.
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Section II – Removal Procedure

NOTE: Pictures may vary slightly between applications.

1. Disconnect the negative battery cable from the battery.
2. Make a sketch or a note of all hoses & cables attached to the supercharger unit.
3. Remove the fuel return line bracket from the driver's side of the manifold (Arrow A, Figure 2).
4. Remove the diagnostic plug, plug bracket and the ground connector from the driver's side of the supercharger (Arrow B, Figure 2).

NOTE: Not all vehicles have the diagnostic plug in this location. Only vehicles with it here need it removed.

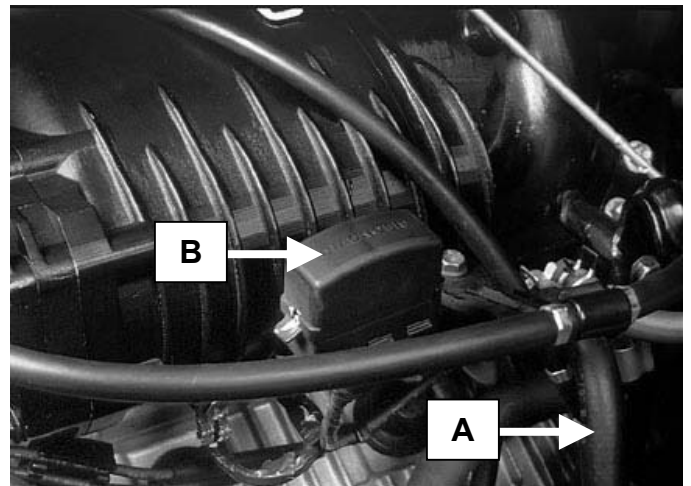


Figure 2

5. Remove the transmission kickdown cable and throttle cable (if necessary, Figure 3).

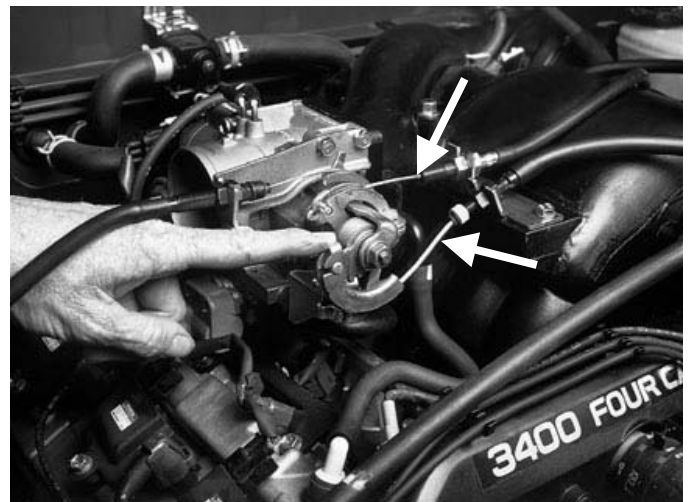


Figure 3

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SUPERCHARGER DRIVE ASSEMBLY REPLACEMENT

6. Remove the throttle cable/evaporative canister hose bracket from the supercharger (Figure 4).
7. Remove the mass airflow sensor & igniter wire harness from the air inlet tube (between the throttle body and air box). Remove the hoses & tubes.

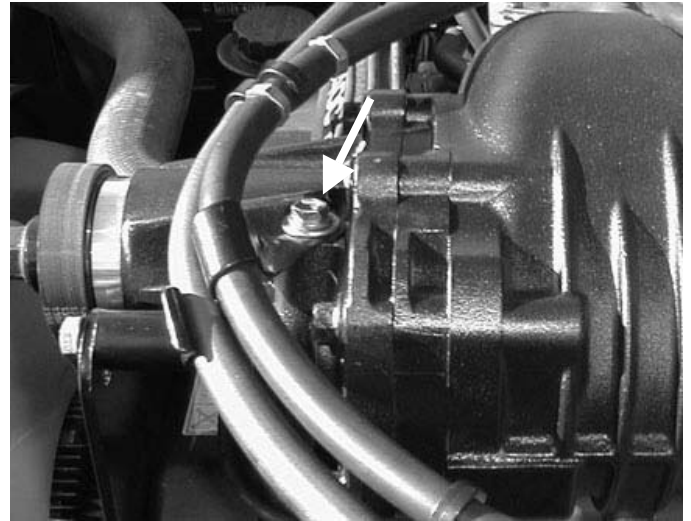


Figure 4

8. Remove the air inlet tube (Figure 5).
9. Remove the PCV hose, throttle position sensor plug(s) and the IAC valve connector.
10. Remove the throttle body. Retain all hardware and the gasket, as they will be reused.



Figure 5

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SUPERCHARGER DRIVE ASSEMBLY REPLACEMENT

11. Remove the oil dipstick tube from the relocation bracket (Figure 6).

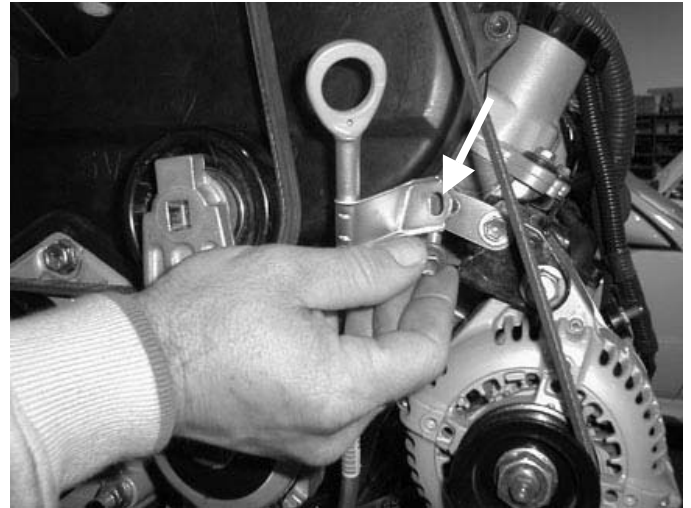


Figure 6

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SUPERCHARGER DRIVE ASSEMBLY REPLACEMENT

12. Use a 3/8" long-handle ratchet to rotate the dynamic tensioner to remove the supercharger drive belt from the supercharger (Figure 7). It is not necessary to remove the belt from the vehicle completely.

NOTE: If the vehicle does not have a dynamic tensioner, loosen the upper alternator bolt (Arrow A, Figure 8) and remove the supercharger drive belt. Remove the 3 idler bracket attachment bolts and remove the assembly (Arrow B, Figure 8). The dynamic tensioner upgrade (00602-17620-090) is a free upgrade under warranty and should be performed while replacing the supercharger drive assembly.

13. Remove the bolts and nuts retaining the supercharger manifold to the engine. If necessary, mark them to put them back in the same place.

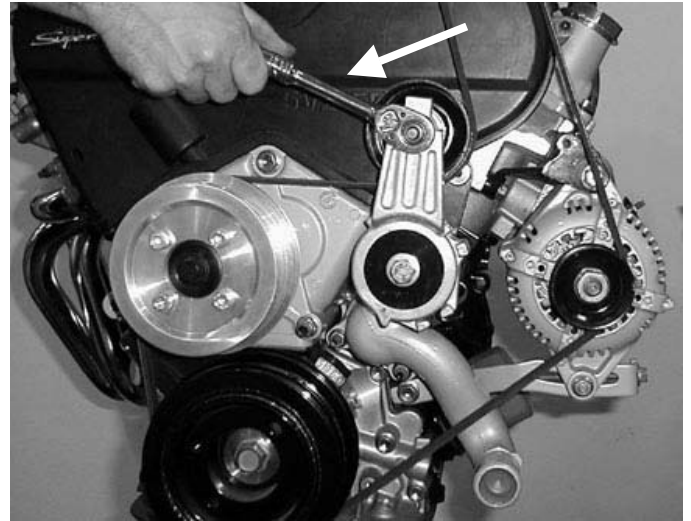


Figure 7

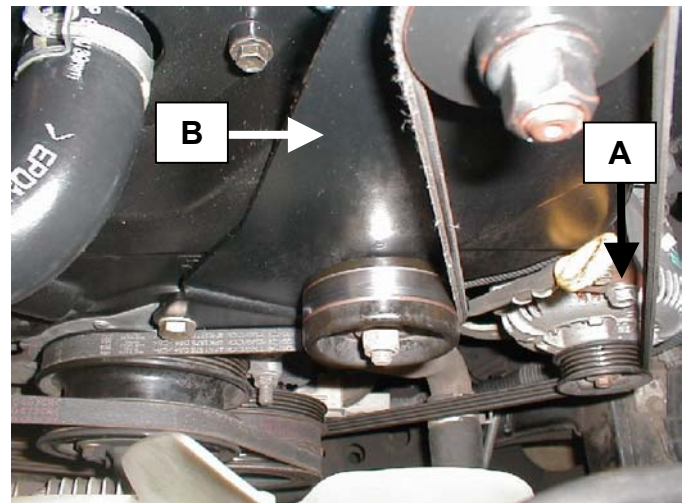


Figure 8

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14. Remove the manifold brace bolt and spacer from the driver's side of the manifold (Figure 9).
15. Remove the supercharger from the engine. Cover the intake ports with rags or tape to prevent foreign articles from falling into the engine.



Figure 9

Section III –Nose Drive Change Procedure

1. Use the pattern in Figure 10 to remove the nose drive attachment bolts.
2. Place the supercharger over a drain pan to catch the oil as the old nose drive is removed.
3. Use a soft rubber mallet to gently tap on perimeter edge of the nose drive to loosen the gasket seal. Use gradual back and forth motions to pull the nose drive assembly from the supercharger

NOTE: The nose drive assembly must be returned to TRD for a full core credit. Please see the return instructions on Page 2 for the procedure.

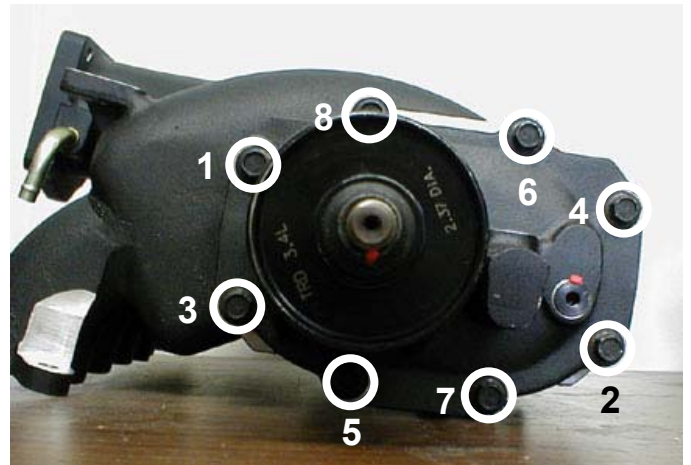


Figure 10

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4. Remove the Phenolic block from the supercharger gear by pulling it straight off of the attachment pins (Figure 11).
5. Wipe the gasket-sealing surface clean and remove all debris.

CAUTION: Avoid contaminating the supercharger gear housing with any debris.

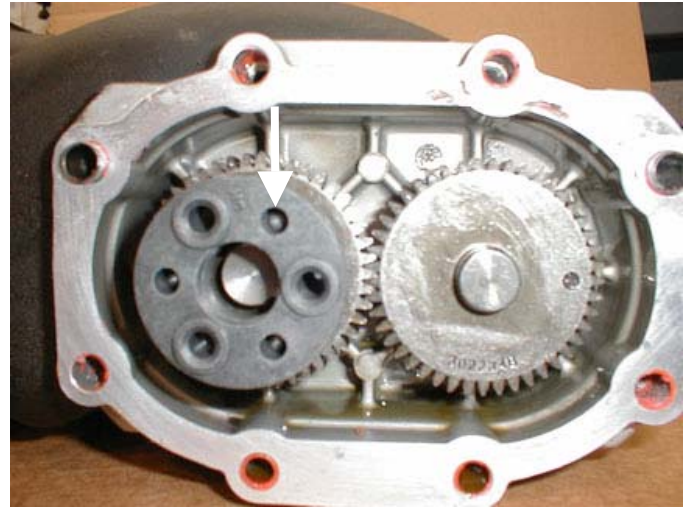


Figure 11

6. Insert the new Phenolic block over the attachment pins.

CAUTION: Insert the attachment pins only into the holes with flanged openings (Arrows, Figure 12). These flanges must touch the surface of the drive gear.

7. Press the Phenolic block until it seats against the gear.

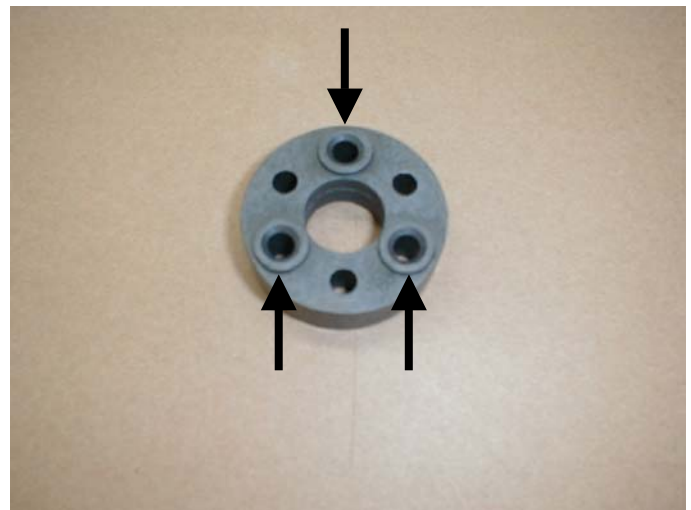


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8. Spread the TRD-supplied Loctite[™] Gasket Eliminator Sealant to the sealing surface of the nose drive assembly (Figure 13).
9. Align the nose drive gear pins (Figure 13) to the holes with flanged openings on the Phenolic block (refer to Figure 12) and press the block into position (Figure 14).
10. Replace the 8 bolts removed in Step 1 on Page 7. Use the pattern in Figure 10 to tighten the drive assembly evenly. Torque the bolts to 20 ft-lbs.



Figure 13



Figure 14

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11. Tilt the supercharger assembly up but be careful not to damage the boost actuator. Use a 3/16" Allen wrench to remove the fill plug (see Figure 15).
12. Fill the reservoir with the supplied fluid (Figure 15). Use all of the oil provided (120 ml).
13. Install the new fill plug.



Figure 15

Section IV – Supercharger Installation

1. Remove the covers from the intake manifold and replace the supercharger. Make sure the gasket is properly placed and no hoses or wires are in the way. The ignition wires should be routed beneath the supercharger drive assembly (Figure 16).



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2. With the assembly sitting flat on the engine, put the factory manifold brace (driver's side) bolt and TRD spacer in first (Figure 17) then install the factory nuts on the studs at each end of the manifold and hand tighten them.
3. Install the long manifold bolt (8 x 1.25 x 170 mm) through the supercharger to the factory manifold followed by the other 2 bolts. Alternate from one side to the other and torque the bolts and two nuts to 13 ft-lbs.



Figure 17

4. Retract the dynamic tensioner with a 3/8" ratchet and place the drive belt back over the supercharger pulley (Figure 18). Make sure the belt is routed properly and is centered on all pulleys.

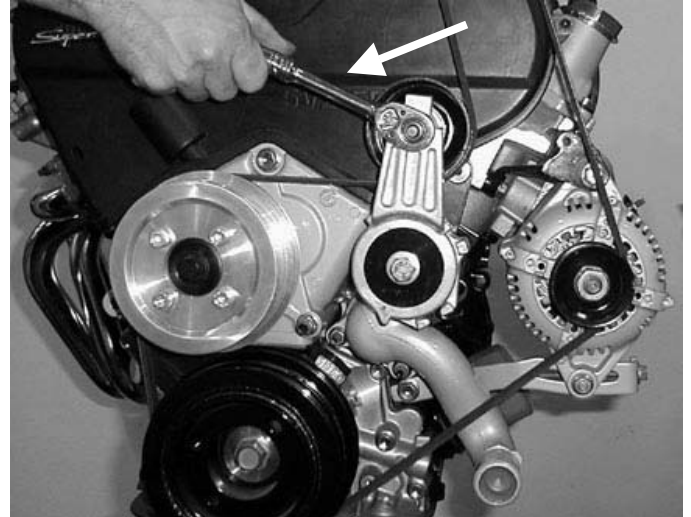


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5. Reposition the dipstick tube bracket and install the bolt removed in Step 11 on Page 5 (Figure 19). Torque the bolt to 10 ft-lbs.
6. Reinstall the throttle body. Make sure the gasket is used and in the correct orientation.
7. Reinstall the PCV hose, throttle position sensor plug(s) and the IAC valve connector.

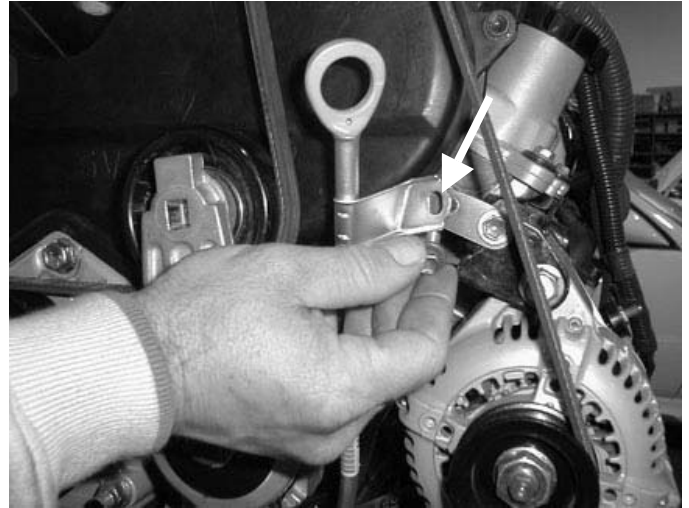


Figure 19

8. Replace the air inlet tube (Figure 20).
9. Replace the mass airflow sensor & igniter wire harness from the air inlet tube (between the throttle body and air box). Replace the hoses & tubes.



Figure 20

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10. Replace the throttle cable/evaporative canister hose bracket to the supercharger (Figure 21).

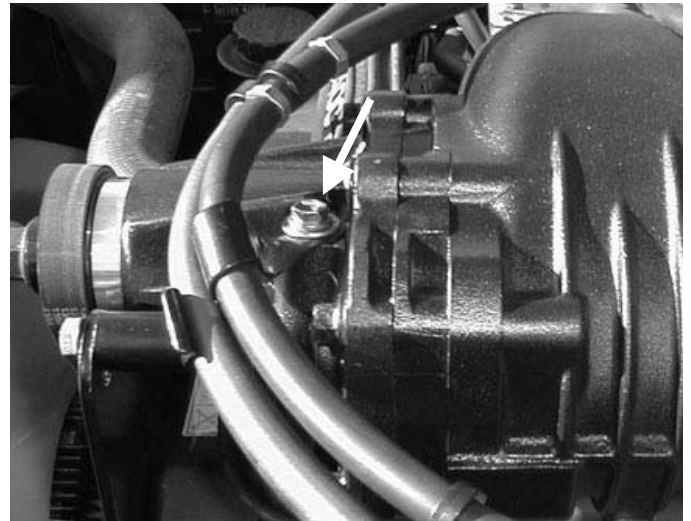


Figure 21

11. Replace the transmission kickdown cable and throttle cable (if necessary, Figure 22).

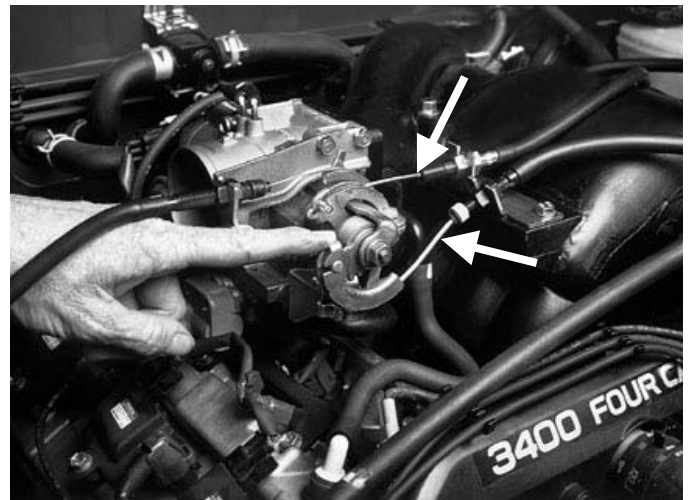


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12. Replace the diagnostic plug bracket, plug and the ground connector from the driver's side of the supercharger (Arrow A, Figure 23).

NOTE: Not all vehicles have the diagnostic plug in this location.

13. Replace the fuel return line bracket to the driver's side of the manifold (Arrow B, Figure 23).
14. Use the diagrams made in Step 2 on Page 3 to connect and check all vacuum hoses, cables and brackets.
15. Reconnect the negative battery cable.
16. Start the engine and check for leaks.

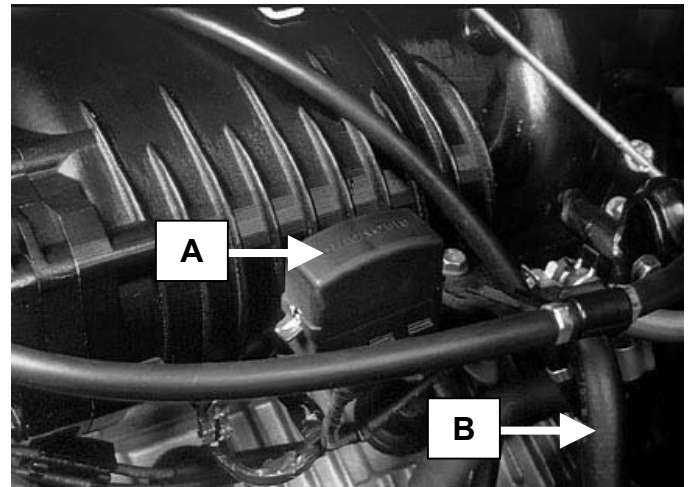


Figure 23