



Installation Instructions

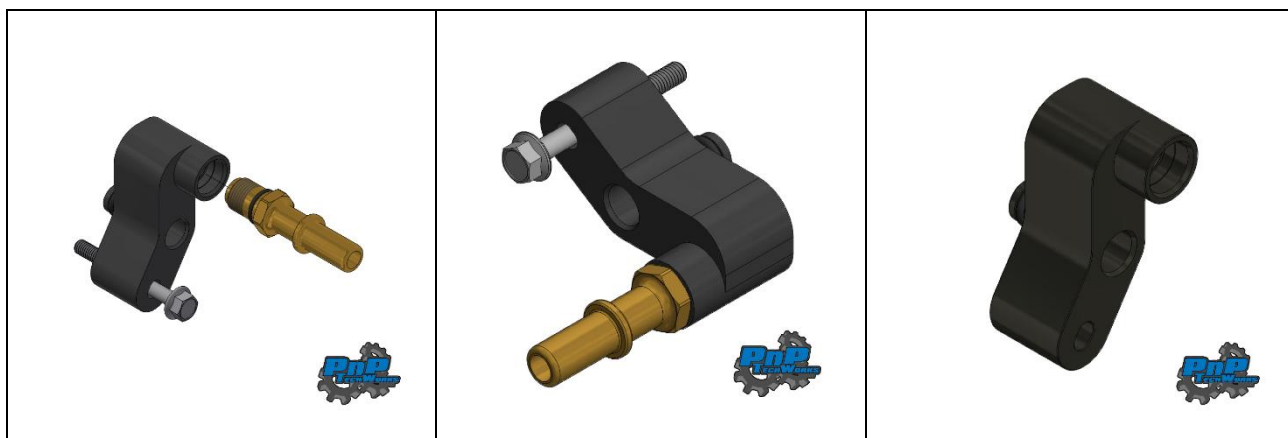
Vacuum Pump Delete Manifold

Part Number: Part #1300482

Support: help@pnptechworks.com or 513-330-5358

Vehicle Applications:

2014-2018 L83 (5.3L) and L86 (6.2L) GM Truck and SUV's
L8T (6.6L) and L8P (6.6L) Crate Engines



Preface:

This product is intended to quickly and easily provide a manifold vacuum source for the brake booster. Vehicles equipped with the L83 5.3L or the L86 6.2L have an engine driven vacuum pump to provide vacuum for the brake assist booster. The vacuum pump is failure prone and can be costly to repair. The brake assist booster in previous generation vehicles used a manifold vacuum source for power. The intake manifold on the L83, L86, L8T, and L8P do not provide an easy source for engine vacuum. This product easily installs under the EVAP solenoid which then provides a fitting for vacuum connection. Depending on how you ordered the manifold, an OEM style connection, -6AN, and -8AN connection are available. Optional plugs or block off plates are also available to block the oil feed and return ports of on the L83 and L86 engine blocks.



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Instructions: Remove Vacuum Pump

Step 1.1: Remove Vacuum Pump Hose

Tools Required:

- Pick and/or Prying Tool

Disconnect the electrical connector from brake booster vacuum sensor.

Remove the brake booster vacuum sensor from the brake booster.

Slide the red locking tab out on the fitting at the vacuum pump and remove the fitting.

Remove the friction clip retaining the hose and remove the hose from the vehicle. The hose will be later modified and reused.



Step 1.2: Remove Vacuum Pump

Tools Required:

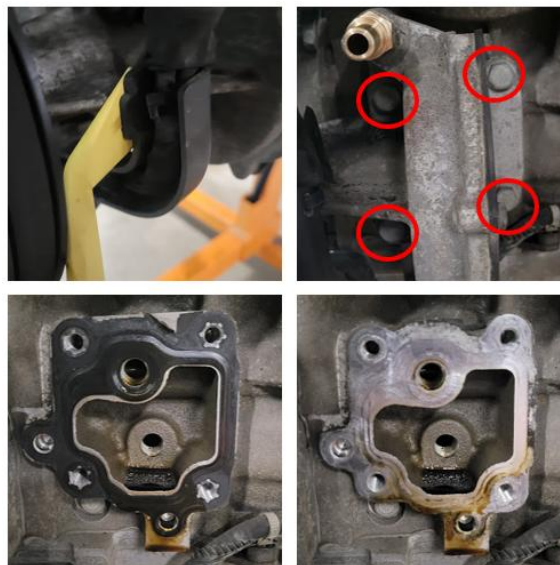
- 13mm Socket Wrench
- Utility knife
- Pick and/or Prying Tool

Use a pry tool to release the friction clip retaining the wiring harness to the side of the pump.

Cut the vacuum pump drive belt and discard.

Remove the 4x 13mm head bolts from the vacuum pump.

Remove the vacuum pump and gasket from the vehicle.





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Step 1.3: Plug Oil Ports on Engine Block

Tools Required:

- 6mm Hex Socket
- 5mm Hex Socket
- Torque Wrench

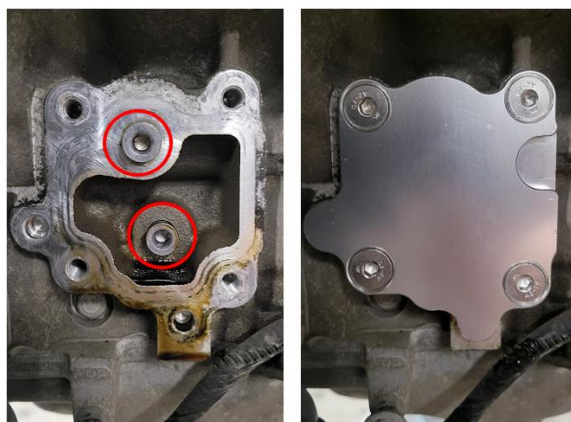
Option 1: 2x GM 11602943 Plugs (sold separately)

Thread the plugs into the two ports on the engine block under the vacuum pump mounting boss. Use a 6mm hex socket to torque the plugs to 22 ft-lbs.

Option 2: Billet Block off Plate (sold separately)

Clean the mating surface on the engine block. Install the block off plate and thread in the 4x flat head bolts. Use a 5mm hex socket to torque the bolts to 18 ft-lbs.

THREADED PLUGS AND BLOCK OFF PLATE CANNOT BE USED TOGETHER!



OPTION: 1 OR OPTION: 2

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Instructions: Harvest Fitting from Vacuum Pump

Step 2.1: Remove Fitting From the Vacuum Pump

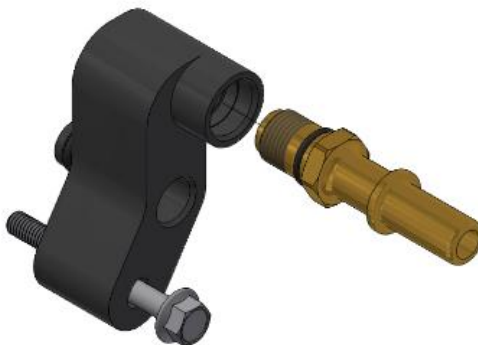
Tools Required:

- 17mm Boxed End Wrench

There were two manufacturers for the OEM engine drive vacuum pumps. Early models have part numbers of **12662552** and **12660004**. These pumps have a **silver** vacuum fitting with a **24mm** hex. This fitting **CANNOT** be reused, and a **"COMPLETE MANIFOLD WITH OEM FITTING"** must be purchased

If your vehicle is equipped with a Wabco style vacuum pump with part number **12659655**, **12696313**, **12669488**, or **12654013**, the **brass** vacuum fitting **CAN BE** reused and the **"manifold only"** option can be purchased.

Use a 17mm wrench to remove the fitting from the vacuum pump and install it onto the manifold.





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Instructions: Install Vacuum Manifold

Step 3.1: Remove Intake Air Box

Tools Required:

- 8mm socket or nut driver

Loosen 8mm hose clamps on airbox and throttle body.

Remove the two breather hoses from the intake tube by squeezing the gray retaining clips and pulling out the hose.

Remove the intake tube from the vehicle.



Step 3.2: Remove EVAP Solenoid Valve

Tools Required:

- 10mm socket wrench

Remove the EVAP hose from the EVAP solenoid by squeezing the gray retaining clip and pulling on hose.

Using a 10mm socket wrench, remove the bolt and fender washer retaining the EVAP solenoid to the intake. Discard the bolt and retain the fender washer.

Remove the EVAP solenoid from the intake. The electrical connector to the EVAP solenoid can remain connected.



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Step 3.3: Install Vacuum Manifold

Tools Required:

- 10mm socket wrench
- Torque Wrench

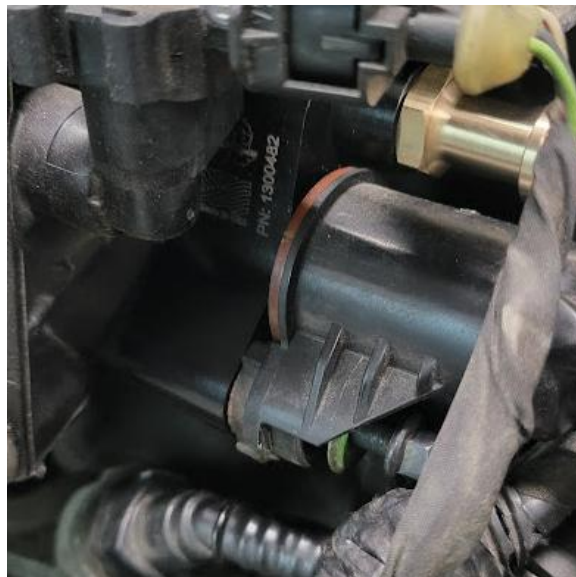
Lightly coat the o-ring on vacuum manifold with oil and insert into the intake manifold where the EVAP solenoid was.

Lightly coat the o-ring on EVAP solenoid with oil and insert into the vacuum manifold.

Install the fender washer that was removed from the EVAP solenoid onto the 55mm long fastener supplied with the vacuum manifold.

Install the new fastener through the EVAP solenoid, vacuum manifold, and thread into the intake manifold. Torque to **40 in-lbs.**

Reconnect the EVAP hose to EVAP solenoid valve.



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Instructions: Modify Vacuum Hose

Step 4.1: Remove Fittings

Tools Required:

- Utility Knife

Inspect vacuum hose fittings for distress or damage. **DO NOT REUSE FITTING IF THE RED SAFETY LOCK IS DAMAGED.** A new vacuum hose, GM 23135228 (sold separately), can be purchased if fittings are not reusable.

Cut and remove the foil heat shield from the pump side fitting.

Using a sharp utility knife, score the plastic hose along the fitting and vacuum sensor. Bend the hose to break it free from the fittings.



Step 4.2: Fabricate New Hose

Tools Required:

- Heat Gun
- Pliers
- Utility Knife

Materials Required:

- 18" of 1/2" Vacuum Rate Hose
- Clamps

Form hose into 90° angle with equal lengths on each side. Insert vacuum sensor and the fitting into the ends of the hose. Secure hose with clamps.



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Step 4.2: Install New Hose On Vehicle

Tools Required:

- None

Insert vacuum sensor into the brake booster. Install electrical connector.

Insert connector onto the vacuum manifold. Ensure safety lock is engaged.

Start vehicle and check for vacuum leaks. Ensure proper brake function prior to driving vehicle.

