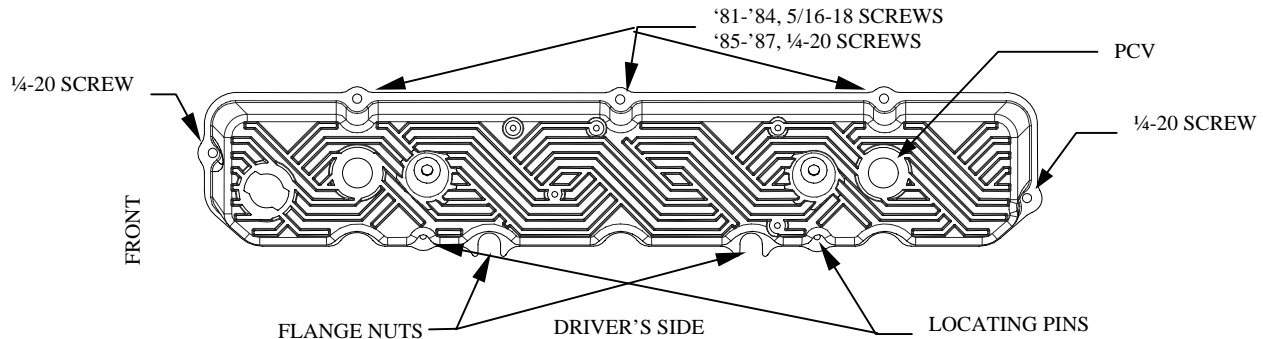




Installation Guide For PML's 4.2L (258ci) Jeep Aluminum Valve Cover.



On the driver's side of your cover are 2 locating pins which engage holes on the cylinder head and help keep the gasket in position. Also note the 2 flanged nuts that clamp the driver's side of the cover to the head. Our cover makes use of both of these features.

For '81-'84 heads PML's cover was designed to be secured using (2) 1/4-20 (front and rear only) and (3) 5/16-18 (passenger side) machine screws and (2) flanged nuts (driver's side). For '85-'87 secure the cover with (5) 1/4-20 (passenger side and the front and rear of the cover) and (2) flanged nuts (driver's side). For both applications, use of the studded rocker arm pivot bridges is unnecessary.¹

Your PML valve cover kit includes:

- 5/16-18 SS "allen" type capscrews and washers (5).
- 1/4-20 SS "allen" type capscrews and washers (5).
- 7/32 x 1/2" locating pins (2).

Tools you may require:

- 5/16-18 starting and bottoming taps.
- 1/4-20 starting and bottoming taps ('81 heads without front and rear fasteners).
- 1/4" HSS drill.
- 13/64" HSS drill ('81 heads without front and rear fasteners).

You may also need:

- Non-studded rocker arm pivot bridges (2), PN 3236513, NAPA PN CEP2141087.
- Thread sealant.
- New PCV and air cleaner grommets (recommended).
- Cork replacement gasket, NAPA part number FPG #VS50244C (Cork). Do not use the stock rubber gasket, your cover may be damaged.
- RTV gasket sealant.

¹ PML has made provisions for the use of studded bridges with our cover. If you intend to use studded bridges the 2 conic indentations need to be center-drilled to 3/8". PML can provide these holes for an additional charge.

Installation Procedure:

- 1) Remove PCV, air cleaner, bracket assy, etc. from your old valve cover. Disconnect hose(s) from thermostat, fuel line etc. and set aside to provide clearance for the removal of the old and installation of your new cover.
- 2) Determine what fasteners are currently used to attach the valve cover on your Jeep.
- 3) The original plastic valve cover design had no fasteners along the perimeter of the cover. It was attached to the head with two studs on the rocker-arm pivot bridges. Dowels along the perimeter of the cover aligned it to corresponding holes in the head, (3) on the passenger side and (2) on the driver's side. Some versions of this cover also had 1/4-20 machine screws securing the front and rear of the cover. A second design had (3) self tapping screws on the passenger side. The alignment dowels on the driver's side and the stud bridges remained, as did the 1/4-20 machine screws on the front and rear of the cover. If your cover is either of these configurations you will need to:
 - a) Enlarge the 3 holes on the passenger side using a 1/4" HSS drill. DO NOT drill the holes any deeper as you will penetrate the water jacket. If you do penetrate the water jacket coat the screws with Permatex thread sealant before attaching the cover. Tap the 3 passenger side holes using a 5/16x18 starting and bottoming taps. (These taps can be purchased from your local tool supplier.)
 - b) Some early heads were not drilled and tapped for the 1/4-20 screws at the front and rear of the cover. If this is the case with your engine you will have to drill and tap these holes. The best results will be obtained using a drill press or mill. Using the cover as a guide mark the centers of these holes. Drill to a depth of 3/8" using a 13/64" HSS drill. Tap the holes with a 1/4-20 bottoming tap. Be careful to collect all the chips from the drilling and tapping operations, you wouldn't want them to find their way into your valves.
- 4) The third design change eliminated the use of the stud bridges and used 1/4-20 screws in the three positions on the passenger side and the front and rear of the cover. If this is the case with your engine no modification should be required. Passenger side holes are already tapped for 1/4-20 machine screws.
- 5) If you have studded rocker arm bridges you will need to remove the studs or replace them with non-studded bridges (Factory P/N 3236513, NAPA PN CEP2141087).²
- 6) Press in the 7/32 x 1/2" locating pins into the drivers side holes on the underside of the cover's flange.
- 7) Clean the head and remove any old gasket material from the sealing surface. Apply a coat of gasket sealant to the sealing surface.
- 8) Transfer the PCV grommets and the oil filler cap from your old cover to your new cover.
- 9) Install your new cover and gasket. Finger tighten all of the screws and the flanged nuts first, then working from the center out securely tighten the screws.
- 10) Re-attach PCV, emissions and air cleaner to the top of the cover. Re-connect hoses, fuel line, battery, etc.
- 11) Check your oil level. Start the engine and check the cover for leaks.

² The studs on your original rocker arm bridges can be cut off, or pressed out. We recommend removing the brackets from the engine to make this change.