

21pc Hand Held Vacuum Pump And Brake Bleeding Kit-Upgraded

- . Checks vacuum operated automotive components. .Can be used to bleed hydraulic systems or siphon fluids
- . Includes integrated vacuum/pressure gauge. .Special vacuum/pressure release mechanism
- . includes assorted and hydraulic fluid reservoir

INTRODUCTION

The Power built Vacuum/Pressure Pump may be used for many different tasks. Listed below are some examples

1. Testing vacuum-operated components(door locks, actuators, etc)
2. Engine mechanical testing (valves, cam timing, head gasket, etc)
3. Brake and clutch hydraulic system bleeding
4. Measurement of vacuum supplied by boosters reservoirs solenoids or the engine

DESCRIPTION

The Power built Vacuum Pump Kit consists of the following items:

- . Vacuum Pup Unit
- . Fluid Reservoir
- . Fully Sealing Cap for spare Fluid Reservoir(for temporary storage)
- . Long vinyl Hose
- . Assorted Small Sections of Vinyl Hose
- . Assorted Adapters, Tees, Caps and Suction Cup



The vacuum pump consists of the following parts. See Figure: Legend

1. Vacuum/Pressure Gauge-A21/2" gauge calibrated in PSI,BAR and inches of mercury
2. Vacuum Fitting -This barbed fitting is for attachment of the supplied hose. It can also be directly attached to vehicle vacuum lines or components
3. Vacuum/Pressure Release Collar- The external collar on the pump slides back and forth on the pump body. The forward position is for pressure. The rearward position is for pressure. The rearward position is for vacuum. Moving the collar from one position to the other position will release stored pressure or vacuum to the atmosphere
4. Handles-Comfort grip handles are designed so that they can be easily squeezed together to create vacuum or pressure
5. Pump Body- Pump body includes piston. Cylinder and vale assembly.

REPLACING PARTS:

When replacing the vacuum or vacuum fitting .It is important to wrap the threads with Teflon plumber's tape before threading the pieces together. A good seal must be maintained.

CAUTIONS AND WARNINGS REGARDING USE OF THE VACUUM PUMP

Handling-The Power built vacuum pump is a precision instrument . Handle it with the same care you would with any other precision tool . Do NOT drop it . handle it on hot manifolds or other engine parts .Avoid Letting fluids Enter the pump itself. If using as a fluid pump, make sure to use the fluid reservoir included.

Lubrication & Cleaning - The vacuum pump is lubricated with silicone oil at the factory. If you find it necessary to lubricate your pump, use silicone oil; or a silicone based brake fluid (Dot5). Do NOT use petroleum based lubricants such as WD-40, motor oil, penetrating oil, etc.). Do NOT use cleaners such as carburetor cleaner or brake cleaner sprays in the pump mechanism.

USING THE PUMP

The Power built vacuum pump can be used for a variety of automotive testing and diagnosis tasks. Examples are listed below:

1. Engine mechanical testing .such as testing of engine vacuum .testing intake and exhaust valves , testing manifolds and manifold gaskets for leaks .etc.), air/fuel mixture, cylinder leakage , turbocharger wastegate .and mechanical and electric vacuum pumps.
2. Testing of vacuum-operated mechanical components,including transmission modulators,heater and air conditioner doors ,cruise control modulators , headlight doors , etc .
3. Fuel system testing, such as fuel tank testing, and testing of fuel lines ,pumps, and pressure regulators .
4. Ignition system testing , such as distributor advance mechanisms , spark delay valve testing , vacuum delay valve testing . etc .
5. Emission control system testing , such as EGR valves . PCV valves , ported vacuum switches ,thermostatic air cleaners . exhaust heat control or heat riser valves , back pressure transducer valves, etc.).

GENERAL USAGE INSTRUCTIONS

The Power built vacuum pump is most often used as a vacuum pump or test instrument . The pump may be connected to a component with the provided vacuum line , connected directly to the component itself . or connected to an existing vacuum line directly or with the provided tee connector .

To create vacuum :

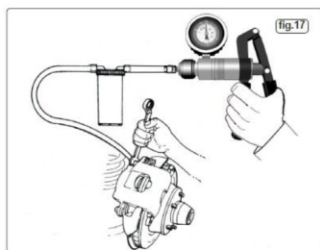
Move the collar to the rearward position (toward the handles).With the pump connected to the appropriate component or vacuum line, simply squeeze the moveable handle of the pump with your hand. Continue the squeezing motion until the gauge reads the desired level of vacuum.

To check vacuum :

With the pump connected to the appropriate component or vacuum line, read the measured amount of vacuum at the gauge (engine running). Do NOT pump the handle, as this will cause an incorrect reading .

RELEASING VACUUM

To release vacuum, slide the collar forward to the release . This allows air to enter the system relieving the



vacuum.

PRESSURE:

Move the collar to the forward position (away from the handles), With the pump connected to the appropriate component , simply squeeze the moveable handle of the pump with your hand . Continue the squeezing motion until the gauge reads the desired level of pressure .

To check pressure :

With the pump connected to the appropriate component or vacuum line , read the measured amount of pressure at the gauge . Do NOT pump the handle ,as this will cause an incorrect reading .

Releasing pressure:

To release pressure slide the collar rearward to the release .

Bleeding hydraulic components :