

CARDONE ProTech

Supporting Today's Professional Technician



Preventing Premature Failure of Pulley-driven Vacuum Pumps

Application:

All pulley-driven vacuum pumps.

Problem:

Premature vacuum pump failure.

Cause:

Incorrect belt tension, bent pulleys, collapsed or deteriorated vacuum hoses, brake fluid entering the unit or wrong unit.

Solution:

Follow the checklist below to prevent pump failure.

- Verify pump is correct for the application. Different shaft sizes are used because of different pump rotation. **DO NOT** modify the pulley to force installation. If the pump is operated in the wrong direction it will fail.
- Do not over-tighten pulley belt. Make sure an automatic tensioner is working correctly. Be sure the belt is properly aligned with the pulley or tensioner.
- **ALWAYS** install the pulley using the supplied installation kit or appropriate tool. **DO NOT** use a press or hammer to install pulley.
- A faulty master cylinder or booster seal can allow brake fluid to enter the vacuum pump. If brake fluid enters the system it will be necessary to replace all three parts.
- Do not allow radiator or power steering hoses to contact the pump. Excess heat transferred from the hoses will destroy the vacuum pump.
- Check inlet hose for collapsing. A blocked or collapsed hose will cause bearing failure. When replacing vacuum hoses use only vehicle manufacturer specified hoses.
- **DO NOT LUBRICATE THE UNIT!** CARDONE units are assembled using a specific type and amount of lubricating oil. Adding oil through the hose will damage the diaphragm and cause the unit to fail prematurely.
- Be sure the area around the vacuum pump is clear of debris.
- Verify the repair by checking the available vacuum before and after vacuum pump replacement. Use a vacuum gauge to measure pump vacuum level (minimum 18 inches of mercury).

See reverse side for vacuum pump testing tip.

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Be sure to measure vacuum properly!

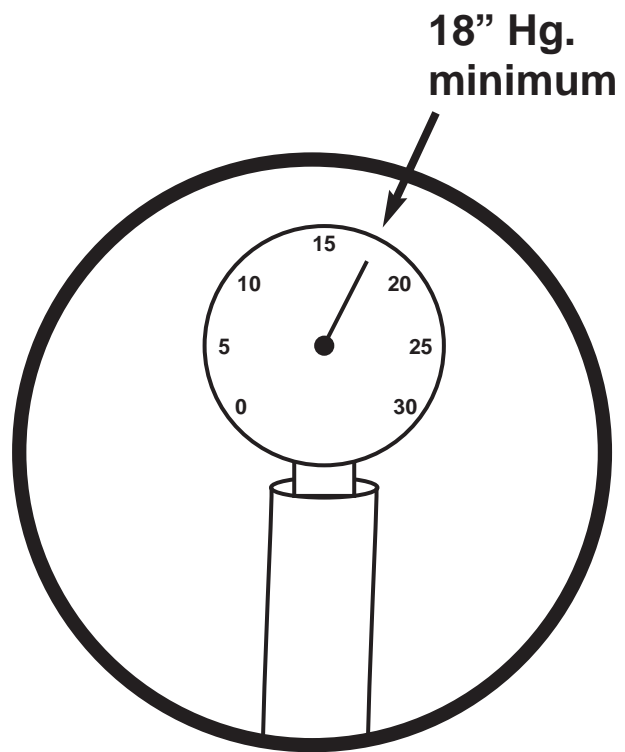
If a customer's vehicle is exhibiting the following symptoms, you may need to replace the vacuum pump:

- Brake pedal is firm or hard (booster)
- Check engine light is on (control valve)
- Lack of power, poor acceleration or a rough idle (advance timing)
- No control over heat or A/C - defaults to defrost mode (HVAC)
- Inoperative cruise control

Proper measurement of vacuum is critical in determining whether a pump has failed. Placing a thumb over the hose opening to test suction is **NOT** sufficient. You must use a vacuum gauge to measure it properly. If the measurement comes to anything less than 18" Hg., then you have a faulty vacuum pump.



**INCORRECT
METHOD**



**CORRECT
METHOD**