



# 841001 Brake Vacuum Pump Installation Instructions

Thank you for your purchase of the Performance World auxiliary brake vacuum pump. It is designed to run in tandem with your engine to supply appropriate vacuum to the brake power booster for applications where the engine does not produce enough vacuum at idle to sustain the power brake system. Alternatively, the pump can be installed as the primary vacuum source as shown on page 4 but please note that pump life is reduced as the pump will run more often. It is imperative that you read and follow these instructions to ensure proper function after installation.

## 1) READ INSTRUCTIONS FIRST BEFORE INSTALLATION!

Verify contents of kit are included:

- Vacuum Pump
- Vacuum Hose
- Vacuum Switch & Manifold (replacement switch #841050)
- 40A/30A Relay/Harness (replacement #REHAR)
- Silencers (2) (replacement #841020) (already installed on pump housing & outlet tube)
- Rubber mounts with nuts and washers (4)
- Wire (bulk red and black) and terminals (assorted)
- ABS check valves (2) and brass "T" fitting (1)

2) Install the pump in a suitable location using the (4) supplied rubber isolation mounts. The pump should be mounted to a sturdy area such as a frame rail or rad support away from heat, water and road debris. Avoid loose sheet metal panels as they may vibrate and cause noise.

3) Assemble the switch to the manifold using teflon tape or appropriate thread sealer. It is important to ensure there are no leaks. Mount the relay and vacuum switch/manifold assembly in a suitable location close to pump but away from exhaust heat and water.

4) Plumb the vacuum hose per the schematic on page 3.

- a) Pump to supplied check valve (check valve is directional - black side to vacuum source)
- b) Check valve to vacuum switch/manifold
- c) Vacuum switch to brass tee
- d) One side of brass tee to vehicle brake booster (with OEM check valve), the other side of tee to supplied check valve (note check valve direction as above)
- e) Check valve to engine manifold vacuum (non-ported vacuum source)

5) Connect relay harness wires as follows:

- Relay Terminal #86 (black wire) to the vacuum switch using 1/4" spade terminal
- Relay Terminal #85 (white wire) to a 12V (+) fused switched (ignition) source.
- Relay Terminal #30 (blue wire) to good vehicle chassis ground (-) using the supplied ring terminal.
- Relay Terminal #87 (yellow wire) to black (-) wire on pump using the supplied bullet terminal.
- Relay Terminal #87a (red wire) **NOT USED**. (Wire can be removed if desired)

6) Connect the remaining vacuum switch terminal to a good vehicle ground (-) using the supplied terminals.

7) Connect the red wire from the vacuum pump to the supplied 10A fused wire and then to the positive (+) battery terminal using the supplied wire and terminals.

8) Congratulations! You have completed your installation of the Performance World vacuum pump. Before you start the vehicle, review the schematic on page 3 to ensure all your connections are correct. The pump should run when vacuum drops below 14"hg +/- and stop at 19"hg +/- ONLY.

**Troubleshooting:**

**Fault:** Pump does not run

**Possible cause:** No power to terminal 85 or to pump, poor ground to vacuum switch or relay.

**Solution:** Check fuses, wiring & grounds.

**Fault:** Vacuum pump won't stop running or runs too frequently.

**Possible cause:** Vacuum leak in hoses or power booster or check valves installed incorrectly.

**Solution:** Check vacuum with a gauge to ensure pump is producing vacuum above switch limits, test for vacuum leaks in system, check installation of check valves.

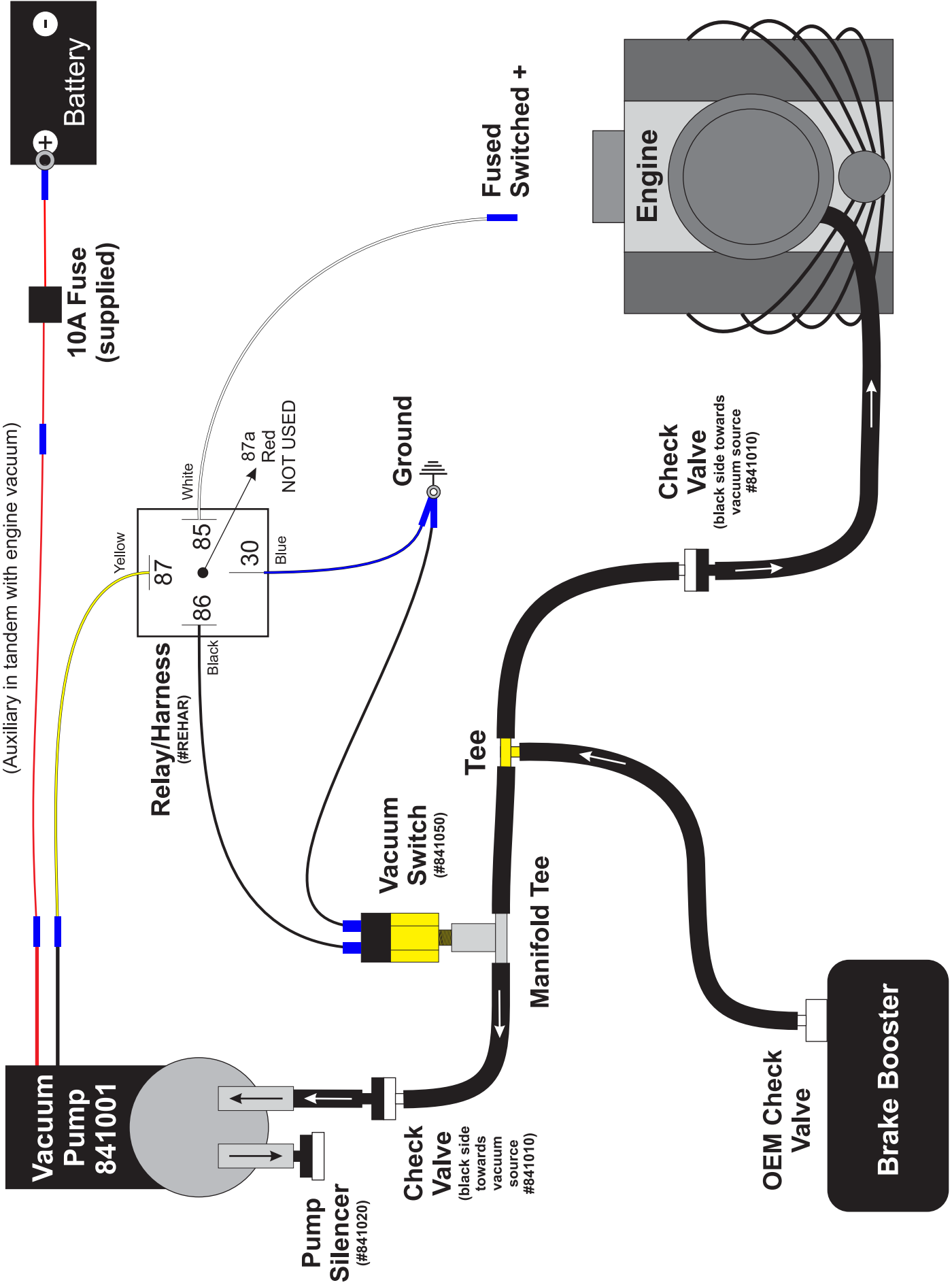
NOTE: Altitude and barometric pressure WILL affect the vacuum pump but NOT the vacuum switch. If you are at high elevation (above 3,000ft) and experience a situation where the pump runs continuously, you may need to install a switch with a lower activation range.



**Any questions, please contact the place of purchase or e-mail [sales@performance-world.com](mailto:sales@performance-world.com)**

# Recommended Installation

(Auxiliary in tandem with engine vacuum)



# Alternate Installation

(Sole supply of vacuum to OEM Booster)

