

**SUPERCHARGER USER GUIDE:**

The following information and recommendations are designed to promote years of trouble-free service for your supercharger. If the unit is given proper care and is operated using the recommendations and instructions set forth in this guide, the unit will last the life of most vehicles.

Ensure that you have selected the correct compressor and impeller speed for the job. **APG** (AIRPOWER GROUP) offers compressor matching services to help you select the proper supercharger for your application. If the vehicle is modified in addition to the supercharger (i.e., heads, cam, etc.) or you have increased the impeller speed, or are creating a custom installation, you must follow guidelines outlined in the Vortech/Paxton Racing Supercharger Owner's Manual Guide (P/N: 008515). As an additional reference, please see the Vortech/Paxton Street Supercharger System owner's manual (P/N: 008516).

OPERATION AND ENGINE STARTUP CONSIDERATIONS:**1. Installation**

- a. **Engine oil fed units** - the supercharger must be mounted within 45° of vertical. That is 45° to the left or right with the lowest of the three oil return provisions selected for the drain. This is to provide proper oil control and drain-back.
- b. **Self-lubricated units** - These units are NOT "universal fit". Proper installation of a self-lubricated supercharger requires the unit to be configured in the application as either 45° left tilt, 45° right tilt or zero° tilt (straight up). Consult with Vortech/Paxton prior to engineering a custom self-lubricated supercharger application.
- c. The input shaft must be parallel to the crankshaft.

2. Start-up

- a. Never operate your engine at full throttle when the engine is cold. When starting the engine each day, allow plenty of time for the oil to reach full operating temperature before running above 2,500 RPM.
- b. Full supercharger operating temperature is generally achieved after the engine water temperature has been at the normal operating range for two or three minutes.

IMPORTANT COLD WEATHER INFORMATION: In order to achieve the low noise level of Vortech/Paxton superchargers, Vortech/Paxton specifies manufacturing procedures that call for minimal internal clearance. These precise tolerances however are not conducive to temperatures below 25° F. Therefore, storing the vehicle in a heated garage and/or employing the use of an engine block heater/aftermarket engine blanket is required when the vehicle is subjected to a "cold startup" in ambient temperatures below 25° F. Failure to comply with this may result in immediate supercharger failure and invalidate the supercharger warranty.

3. Impeller speed

- a. Maximum impeller speeds are not the same for all units. No unit will run at its maximum speed continuously without optimum conditions and additional coolers, filters, etc. Refer to the Support section of the Vortech/Paxton website to find the maximum speed for your specific model of supercharger.
- b. Rapid engine/supercharger deceleration may cause engine and/or supercharger failures. Any "free revving" of the engine without a load on it can cause premature supercharger failure.

NOTE: Increased impeller speeds can increase boost pressure, but may do so with a penalty to supercharger efficiency. Compressors must be properly matched to each application.

SUPERCHARGER SUPPORT SYSTEM GUIDELINES:

1. **Air Intake** - Always use an air filtration system on the inlet of the supercharger to prevent the supercharger from ingesting foreign objects. The filter must be in good condition and properly secured. If equipped with flex hose, this must be free of damage/leaks.
2. **Drive Belt** - Excessive belt tension can lead to supercharger or crankshaft bearing failure. Never use a cog-type belt on a non-heavy duty (H/D) spec supercharger.

SUPERCHARGER SUPPORT SYSTEM GUIDELINES CONT'D:

3. **Pulleys** - If your supercharger drive belt comes off it may be due to misalignment of the supercharger pulleys caused by installation problems or movement of the mounting plate. Misalignment can also be caused by over tightening (and failing) of the belt, which can negatively affect the supercharger and crankshaft bearings.
4. **Compressor bypass valve** - Always use an appropriately sized compressor bypass valve for the application. Contact Vortech/Paxton for assistance on compressor bypass valve selection.

NORMAL MAINTENANCE GUIDELINES:**1. Engine Oil Fed Units Only**

- a. Clean the supercharger oil inlet fitting every 12,000 miles. When the vehicle is cold, remove the oil inlet fitting at the supercharger and clean it thoroughly utilizing high pressure air to blow the orifice clean before reinstallation. Do not attempt to remove the screen/filter inside of the oil feed fitting. This oil inlet fitting is designed with a very small orifice, which provides a mist of oil directly onto the gears. Never use Teflon tape or other sealants on any oil feed line fitting. Do not over-tighten fittings.
- b. Follow the heavy duty/severe usage maintenance schedule in your vehicle owner's manual. Use the manufacturer's engine oil and oil filter recommendations. Do not use engine oil additives as they may contain solid particulates which can clog the supercharger feed line.

2. Self-Lubricated Units Only

- a. Check the supercharger fluid level using the dipstick at least every 2,500 miles.
- b. Initial supercharger fluid change must be performed at 2,500 miles. The supercharger fluid must then be changed at least every 7,500 miles.
 - i. Drain the fluid, re-fill the unit only with 4 oz. of Vortech/Paxton supplied lubricating fluid.
 - ii. Confirm proper oil level using the dipstick. **DO NOT OVERFILL!!**
- c. Fluid level checking procedure:
 - i. Ensure that the .06" copper sealing washer is located on the dipstick base.
 - ii. Thread the clean dipstick into the unit until it seats.
 - iii. Once the dipstick has seated, remove the dipstick from the unit. Fluid should register in the crosshatched area on the dipstick.
 - iv. **DO NOT OVERFILL!!** Drain excess fluid from the unit if it is above the maximum level on the dipstick.

WARNING: The use of any fluid other than the Vortech/Paxton supplied special lubricating fluid will void the warranty and may cause component failure.