

## FUEL PUMPS

Hilborn has two basic styles of fuel pumps available: One is a gear type, the other is a vane. In this injection system the pump size is matched to the fuel requirements of the engine.

The following are the fuel pumps available and the installations they are most commonly used with:

### GEAR PUMPS

1. PG 150A #00 – Used on extremely small engines such as motorcycles, etc.
2. PG 150A #0 – Medium size engines, 200” up to 400”, on gas, methanol and moderate amounts of nitro.
3. PG 150A #1 – Large engines on gas and small percentages of nitro. Also used for blown engines on gas, methanol and small amounts of nitro.
4. PG 175 #2 – Used for high percentages of nitro with very large unblown engines.
5. PG 175 #3 – Used for very high percentages of nitro with blown engines.

### VANE PUMPS

1. BL235 – Midget offenhauser engines and other small engines such as motorcycles, etc.
2. BL420 – Medium size engines, 200” thru 400”, on gas, methanol and small amounts of nitro.
3. BL630 – Large engines, 400” and up, on gas, methanol, and small percentages of nitro. Also, can be used on blown engines on gas.
4. BL1500 – For all out blown fuel engines and special applications where tremendous quantities of fuel are required.

On the PG 150 series pumps, the first digit of the serial number indicates the pump size. The 00 – is the smallest, and the #1 – the largest. The PG 175 #3 pump is the largest of the gear pumps.

On the vane pumps the BL number indicates size, the larger the number the bigger the pump.

Due to the close tolerances on the fuel pumps, it is mandatory that all repairs be done at the factory. For this reason, no pump parts are sold separately.

The gear pumps and some of the BL series pumps have external relief systems incorporated.

This relief system in no way controls operating fuel pump pressure. No alterations should be made without first checking with the manufacturer.

All fittings and threads in the gear drive pumps are aircraft type and nothing but AN fittings or SAE O-ring fittings can be used without damage to threads.

Changing pumps from one drive location to another sometimes requires a change of pump rotation. This also holds true when using pumps from different engines. Be sure to check before pump is installed. Refer to chart for proper pump application.

As for proper care of any pump when not in use or while engine is being repaired, always put some type of good engine oil in inlet fitting and rotate a few times. This will insure proper lubrication and eliminate possibility of corrosion and pump seizure during initial starting period. All pumps are lubricated by the fuel passing thru them during operation.

All pumps are designed to be run at ½ crankshaft speed. Running pumps at slightly higher speed is possible, but should not be operated at crank speed.

Refer to trouble shooting section for further pump information.

**NOTE:** To change the rotation of the PG pumps, remove cover bolts and cover. Remove the dowel pin, and place in hole 180° opposite. Replace cover and bolts, and rotation will be reversed.