

## **VP-1 DIRECT DRIVE VANE PUMP DRIVE FAILED**

If the feed pump runs but no water flows, and the system is not air bound, the pump drive on your machine may have failed. It could be one of two things. Between the pump head and the motor there is a bronze tang, p/n HF142CPFFS, that fits into a slot in the motor and another slot in the pump head, transmitting the torque. The tang is simple to replace: Remove the pump module front cover and pull it to the side. Remove the stainless clamp p/n PL-PMP-VBC, that holds the pump to the motor and separate the pump from the motor. (leave the hoses in place). Inspect the tang. If it is broken contact the factory or your nearest distributor to obtain a new one.

If the tang has not failed then the rotor shaft may have started to slip. Vane pumps shipped before September 2003 have a two piece shaft/rotor. The shaft is pressed in, and the joint can fail and start to slip under load. It may feel ok by hand but under load it starts to slip. Usually the pump makes a squealing noise when this happens. Temporary repairs can be made by taking the pump apart, drilling the joint, and pressing a pin in place to keep it from slipping. This can be done on bench with a vise and hand tools. Disconnect the hoses and take the pump head to a workbench.

The pump comes apart by removing the circlip on the front cover, pop the cover off. Tap the pump on a hard surface to slide the first graphite end plate out. Next by using a screwdriver or other tool, tap on the end of the rotor shaft that connects to the motor. Tap until the shaft/rotor assembly slides all the way out. If possible, leave the carbon cam and the cam locating pin in place. Now you can work on the shaft. Make sure the two pieces are pressed together all the way. Use a center punch to index the hole in the middle of the bearing area down the center of the shaft. Drill as straight as possible. The pin should be 1/8" diameter. A roll pin works best. Tap the pin in place and using a file, clean things up to be smooth and flush. Tap the shaft back into the body. Be careful that the seal behind the bearing is straight when going through it. Reassemble and test. This will at least get you going until you can get a new pump. As of 8-1-03 all the pumps have a single one piece 316 SS shaft. Models 700 and 1000 take pump no. PL -PMP-240250. The model 400 takes pump no. PL -PMP-140175

If you must pickle or store the unit see MB -3 STORING WITHOUT FEED PUMP

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