

## Instructions for Bleeding Air from a Piston-Type Hydraulic Pump Service Bulletin No. 19807

For Geoprobe® Model 54DT and 66DT Direct Push Machines and BP49 Power Units  
Prepared: October, 2001      Revised: February, 2002

### 1.0 Objective

Air may enter the hydraulic system of a machine when changing the fluid or replacing a system component such as a hose or valve. This is a concern with Model 54DT and 66DT direct push machines and BP49 power units because the piston-type hydraulic pumps utilized on this equipment can be damaged if operated with air trapped in the pump. Remove air from the hydraulics by bleeding the piston pump as described in this document.

### 2.0 Required Equipment

Allen wrench, 5/16-inch (54DT) or 3/8-inch (66DT and BP49).  
Container suitable for catching drained hydraulic fluid.

### 3.0 Bleeding the pump

**NOTE: The following procedure is to be performed with the probe assembly unfolded from the vehicle.**

1. Start the unit engine and hold the PROBE control lever in the fully raised position. This will create high volume fluid flow through the hydraulic system.

A certain level of noise will be heard from the pump area during normal operation. If the pump noise is significantly loud, air is in the hydraulic system. Immediately stop the engine and proceed to Step 2.

If the pump noise is not significant, continue raising and lowering the probe cylinder several times to cycle fluid completely through the hydraulic system. Continue with Step 2.

**WARNING: Shut off the unit engine before performing Step 2.**

2. The hydraulic pump is mounted directly to the Kubota diesel engine. Locate the pump and place a container under it to catch fluid that will drain when the plug is removed. Remove the bleeder plug shown in Figures 1 and 2. Air and hydraulic fluid should flow from the pump. The fluid may appear milky or foamy depending on the amount of air in the pump. Replace the plug once clear hydraulic fluid flows from the port. Repeat Steps 1 and 2 until the pump operates without significant noise.



Figure 1. Hydraulic pump and bleeder plug used on Model 54DT machines.

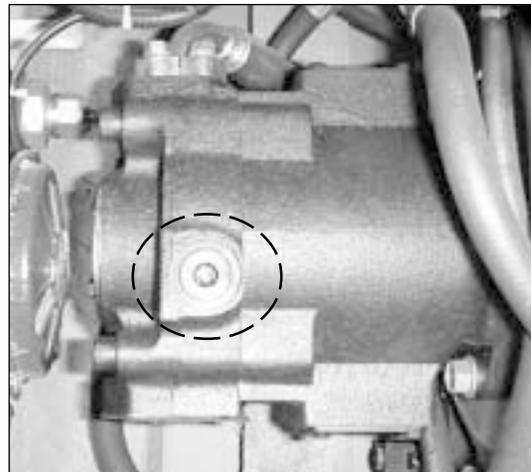


Figure 2. Hydraulic pump and bleeder plug used on Model 66DT machines and BP49 Power Units.