Trouble Shooting the Wintex 1000s, Wintex 2000, and Wintex 3000

Updated: July 2020

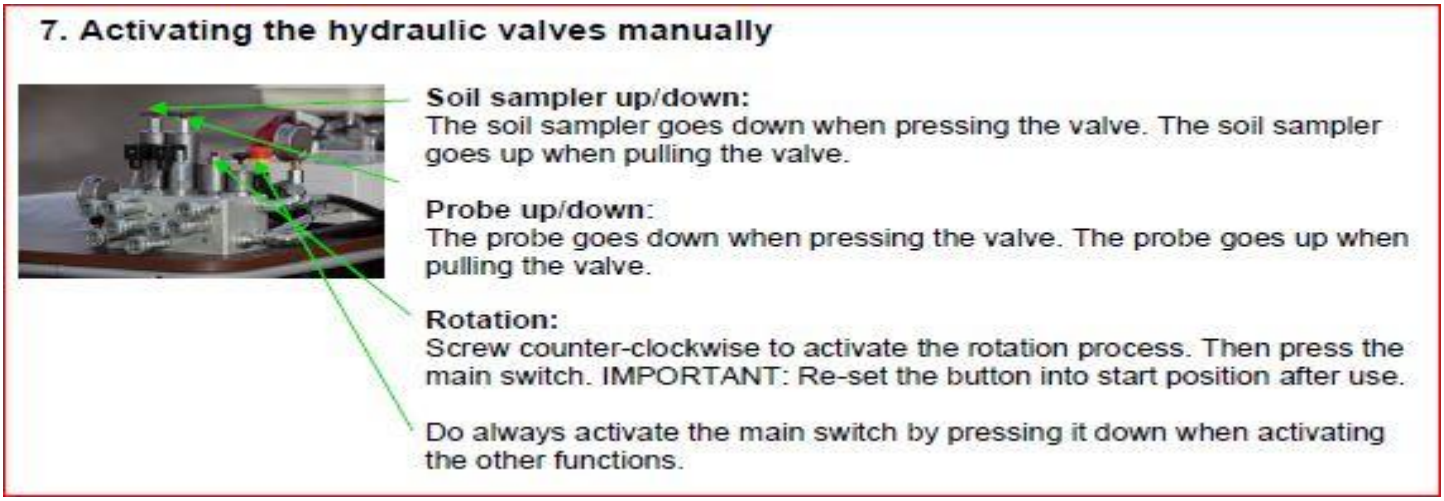
The key to trouble shooting the Wintex 1000s, Wintex 2000 and Wintex 3000 is to closely watch the process cycle. The soil sampler reacts to the input which it receives. Every time a soil sampling cycle has been completed a new process starts. If something appears to be wrong, it is most likely the previous process had failed. That means that if the soil sampler does not rotate, the problem would not be the rotation process but that the probe had not reached the full depth. Therefore, it is important always to consider what the soil sampler just did rather than what just happened. Experience tells us that most failures are based on electrical issues. Consequently, it is a good idea to test the hydraulic functions manually on the valves before starting to trouble shoot. If everything works properly you would have to look at the electrics. Below you will find a list of the most common issues.

1. **Electrical or hydraulic issue?**

Sometimes it can be difficult to determine if the electrics or the hydraulics cause the failure. We recommend testing the functions of the soil sampler by operating the valves manually. If the functions work correctly when testing the soil sampler manually, it is most likely that the valves did not receive the electrical signals. If the functions cannot be carried out manually the failure is caused by the hydraulics.

To operate the valve manually you first open the function you test and close the bypass. If you just close the main valve the pressure will build up to the point where the Motor load will kill the engine.

The manual valves are hard to operate and need a lot of pull or pressure.



3. The probe gets stuck in the ground

There can be different reasons why the probe gets stuck in the ground. First of all, make sure that the bottom plate of the soil sampler is placed firmly on the ground before starting to sample. A slight movement of your vehicle or sampler when the platform is not firmly on the ground can cause the probe to bind in the bottom part of the Wintex. This can be adjusted in the logo and is described in the instruction manual. If the soil sampler stands firmly on the ground but rises from the ground during sampling, you can decrease the pressure of the probe on the hammer valve. If the soil sampler lifts off the ground while sampling, this can cause the soil sampler to move bit and that the probe gets locked in the hole.

Do not raise the pressure of the hammer/probe as it will only lift the soil sampler further from the ground.

Fig. 9
The hammer adjusting valve and the gauge to read the pressure of the probe when it goes down; note that you can only read the pressure while the hammer moves downward.

Grease the sampler grease fitting on a daily basis.

Over time, a worn scraper can make scratches or notches in the probe which might cause the probe to get stuck. It might appear as if the probe gets stuck in the ground, but it is actually the scraper holding the probe which gets stuck. All scratches and notches in the probe must be removed and the sharp edges of the scraper must be slightly ground or replaced in order to prevent it to happen again.

8. Hydraulics

If the Honda engine is turned on and the main valve is activated, the pressure of the system should be 100-120 bars. During sampling the pressure can decrease to 80 bars which is perfectly normal. It is not possible to increase the pressure further as the engine would stall and the components of the soil sampler are not manufactured to withstand more than 120 bars.

Abb. 10
The gauge for showing the pressure of the system

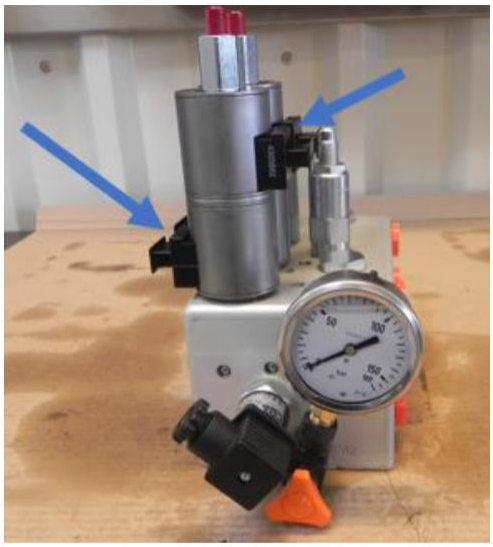
The hydraulic system should be able to maintain a pressure of at least 80 bars when the oil has reached the operating temperature. If you activate the main valve and the pressure gradually decreases, the pump is worn out.

It is very important to make sure that the hydraulic system is clean of dirt and other debris. Change with the recommended oil and the oil filter according to the recommended intervals. Do also change the filter of the oil filler cap which is very important as it prevents dirt from entering the hydraulic system.

9. Honda Engine

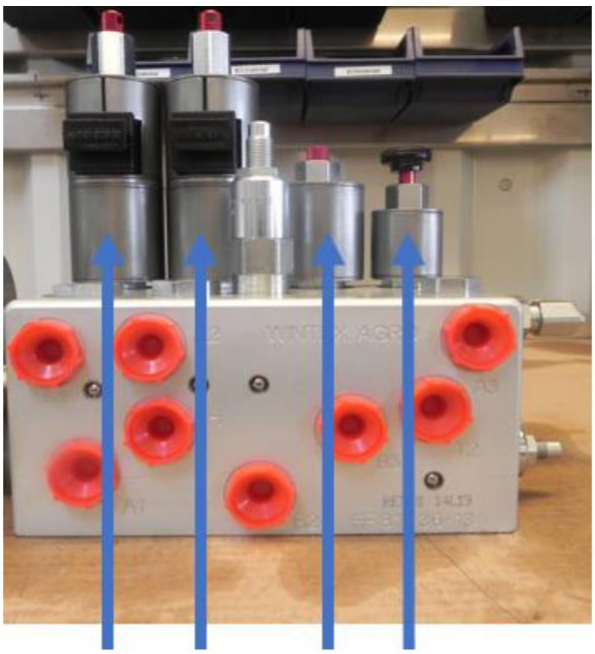
Service the Honda engine on a regular basis as per manual. Most issues we see are due to not changing the Air filter or use fuel with more than 10% ethanol.

Hydraulic Valve Block



Calanoid connects are the most common problem when the Wintex is not operating and just building pressure. This could be due to corrosion on the connection, plug or a damaged cable.

Top calanoid pulling up and bothem one pulling down.



Valve 1. 2. 3. 4.

Valve-

1. Wintex down – push down
   Wintex up – pull up
2. Prob down – pull up
   Prob up – push down
3. Probe turn – push down and turn will let the pin pop up and as soon as bypass is closed the probe will always turn as long as you push the bypass valve down (close bypass).
4. Bypass – if you push this button down you will close the bypass. This means if you don't do another action to move the Wintex, - prob, - or let the probe turn, the pump will build up presser since the oil has no way to go. This is a good way to check the pump pressure.

To proforma an action on the Wintex via manual valve controls: open a Valve (1, 2, or 3) before you push close (push down) the bypass.

The Nr 1 and Nr 2 valve need a hard pull or push to operate! You might want to wiggle the valve as you pull up at the same time to open the valve.