

STEP-BY-STEP GUIDE

COMPETITOR 130 (Standalone model)

1. Using extendable arms wheel the power pack into place about 1 metre away from the borehole location.



2. Position the slip bowl of the rig over the borehole location.



3. Attach legs at all four corners of the rig and secure with pins provided.



4. Level the rig by screwing the feet onto the load bearing plates. The mast must be vertical for correct operation. Tools may become stuck in borehole if mast is inclined at an angle.



5. Remove the safety pin from the slide to enable the weight to slide freely. (Remember to replace this when transporting the rig)



6. Apply grease to the slide before each use of the rig. This increases the life of the brass slides on the weight.



7. Connect the hydraulic hoses. The pair hoses from the left hand side of the control block connect to the hydraulic cylinder. The pair of hoses from the right-hand side connect to the chain motor (or concrete coring attachment when in use)



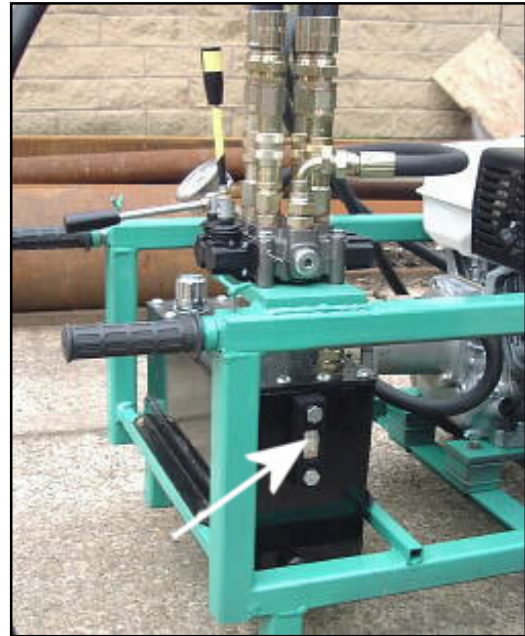
8. The snap-on couplings enable the hoses to be coupled and uncoupled quickly.



9. Check Engine Oil Level before starting the engine.



10. Check Hydraulic Oil Level before starting the engine.



11. Start the engine following the instructions in the separate Engine Manual and raise the Carriage to its uppermost position using the Left-hand lever on the Control Block.



12. This picture shows the rig with the Carriage raised to its uppermost position.



USING THE CONCRETE CORING ATTACHMENT

13. Assemble the Coring Unit by attaching the Concrete Coring Bit via the threaded 1-1/4" UNC connection.



14. Attach the Coring Unit onto the rig at the base of the anvil. Connect the hydraulic hoses leading from the Right-Hand side of the control block onto the snap-on couplings of the Coring Unit. (these hoses may first need to be disconnected from the chain motor).



15. Fill a container with water to use as a flushing medium and suspend this above the height of the Coring Unit



16. Siphon the water from the container through a hose and attach this to the hose spigot on the Coring Unit. The flush must be maintained continuously when coring.



17. Start rotating the core bit by engaging the Right-hand lever on the control block.



18. Lower the carriage fully using the Left-hand lever on the control block so that its weight is bearing down fully on the core bit. Ensure that the nylon ring is in place on the core bit to stabilize the bit in the slip bowl. Adjust the speed of the engine until you obtain maximum rate of penetration.



19. Ensure that water is flushing the bit continuously during coring. If water circulation stops, remove the core bit from the hole to prevent it becoming burnt out.



20. After cutting through the concrete raise the carriage slowly and then stop the bit rotating. Remove the concrete core and detach the Coring unit from the rig.



SOIL SAMPLING USING THE PLASTIC LINER SYSTEM

21. Assemble the sample tube by inserting the plastic liner and retaining shoe, and attach the cutting shoe.



22. Position the sample tube under the rig with the cutting shoe resting on the ground.



23. Attach the sample tube to the drill rig using the bottom adaptor shown here.



24. Drive the sample tube fully into the ground by operating the chain motor (Right-hand lever). Then operate the hydraulic cylinder (Left-hand lever) to extract the tube. Detach the sample tube from the rig and extract the plastic liner containing soil sample.



25. To extend the depth of the sample use the extension rods provided. The first rod used must be the STARTER ROD which is 60 mm shorter than the standard rods.



26. Drop the empty sample tube down the hole and attach the rod to the top of the sampler tube, with the male thread facing upwards.



27. Attach the rod to the rig using the same adaptor as before.

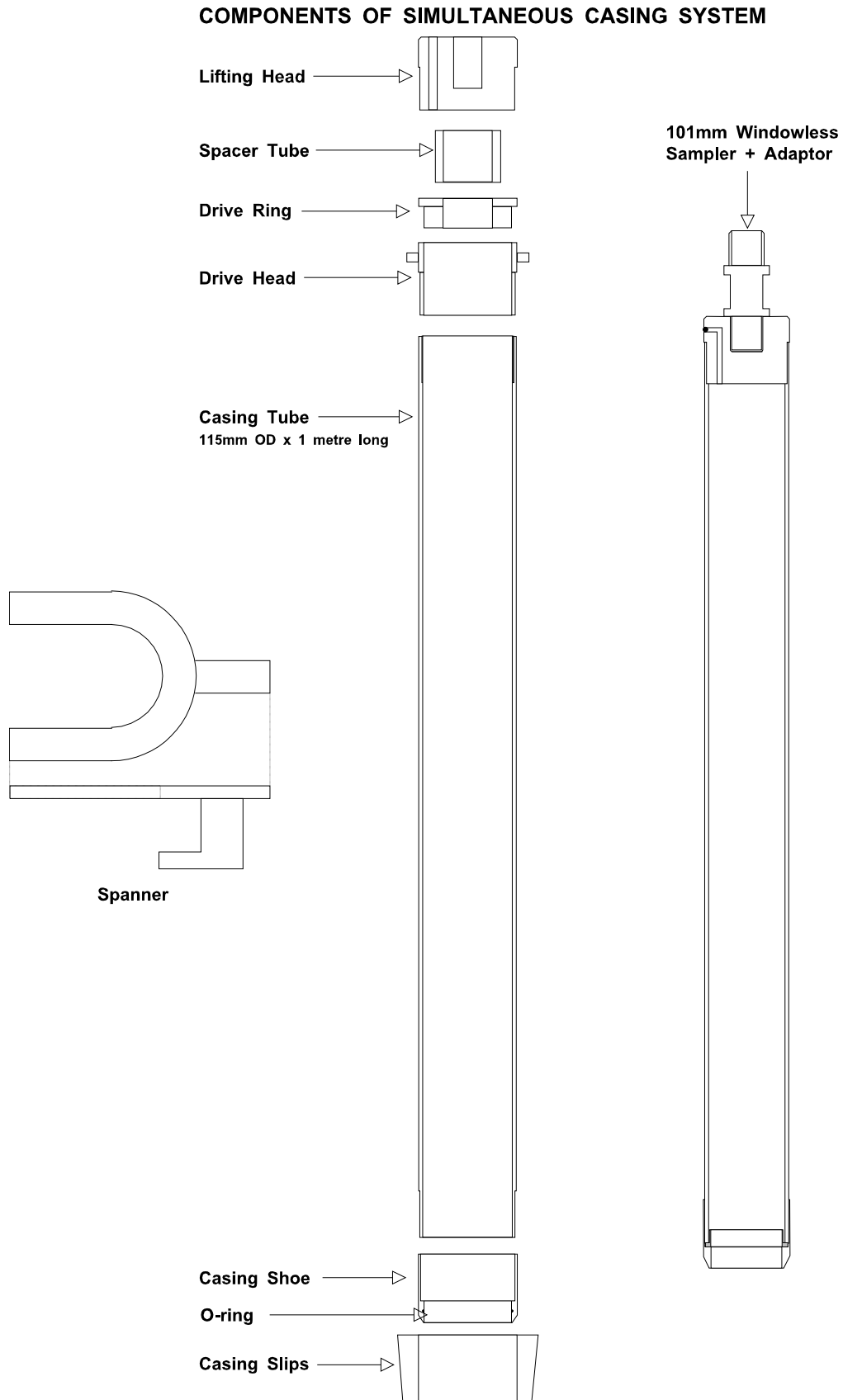


28. To add additional rods use the Rod Spanner to suspend the drill string in the borehole.



USING THE SIMULTANEOUS CASING SYSTEM

29. The Casing System is designed for casing the borehole whilst simultaneously driving a sample tube into the ground. The 101 mm Sample tube is designed to fit inside the 115 mm OD Casing.



30. Attach the casing shoe and the casing drive head to the casing. Place the 101mm Sampler inside the casing.



31. Place the Drive Ring into the top of the casing, add the spacer tube and screw the bottom adaptor onto the top of the sample tube



32. Fit the casing and sampler to the rig using the bottom adaptor as usual.



33. Drive the Casing + Sampler fully into the ground until the casing drive head is positioned in the middle of the slip bowl. Attach the casing spanner to the slip bowl.



34. Use the hydraulic cylinder to extract the sampler. The casing stays in place in the ground.



35. After extracting the sample tube, remove the sample from the tube and replace with a new plastic liner.



36. Drop the empty sampler down the hole and remove the casing drive head.



37. Attach another length of casing and the STARTER ROD to the top of the sampler.



38. Attach the casing drive head, and drive ring (the spacer tube is not required after the first metre). Connect to the rig using the bottom adaptor.



39. Drive down the sampler and second length of casing for another metre.



40. To extract the sampler uncouple the drill rods, each time securing the rod with the rod spanner placed over the slip bowl



41. To remove the casing from borehole, remove the casing drive head and attach the lifting head.



42. Withdraw the casing from the ground and secure with casing slips before uncoupling.



43. It is possible to sample the ground below the level of the installed casing by reducing the size of the sampler from 101 mm to 92 mm or smaller.

