

## Automation Service Performance Verification

Instrument Specifications			
<b>Model Number:</b>		<b>Software Version:</b>	
<b>Valve Box Serial Number:</b>		<b>Needle Serial Number:</b>	
<b>Valve Box Firmware Version:</b>		<b>Needle Firmware Version:</b>	
<b>Date of Manufacture:</b>		<b>Additional Features:</b>	
<b>Customer Name/Location:</b>			

Feature	Pass	Fail	N/A
General Condition of Cabinet and working parts			
Condition of Needle			
Alignment Checks			
Theta alignment and condition			
Condition of Z Axis and lubrication			
Tube spinner and barcode scanner functions			
Condition and Replacement of Tubing and Fittings			
Valve Box Inspection			
System Settings Form Completion			
QC Test			
Final Inspection			
Database Backup			

**Feature: Condition of External Cabinet/loose hardware**

- a. Clean all external surfaces. Inspect the Auto sampler for damage.
- b. Inspect for loose hardware.
- c. Check needle drive belt condition and tension. There should not be any wear.
- d. Check spring tension.
- e. Replace O-Rings

**Feature: Condition of Needle**

- a. Check the needle for damages. Replace if necessary.

**Feature: Alignment Check**

- a. Using the built-in software features, verify needle alignment on the sample test tube/vial and ensure the needle cup makes a proper seal.
- b. Verify the needle when in its down position in the test tube/vial does not bottom out and that the gas displacement hole on the needle is below the top of the cap.



**Feature: Theta alignment check**

- a. Ensure the theta alignment matches to the correct rack position and there is no play in the assembly.
- b. Inspect drive belt for wear

**Feature: Z-Axis inspection**

- a. Inspect the Z-axis assembly. Turn off the auto sampler and ensure proper movement of the drive gears. Lubricate the worm gear as needed.
- b. Inspect flag sensor boards

**Feature: Tube spinner and barcode scanner functions**

- a. Ensure proper operation of the tube spinner that each tube spins
- b. As each tube spins, confirm the barcode scans and barcodes are not being interfered by the sample racks.

**Feature: Tubing and fitting inspection:**

- a. Inspect tubing for staining and wear. Replace all tubing and fittings that need to be replaced.

**Feature: Valve Box Inspection**

- a. Check Light Gate Functionality, perform a new permanent calibration
- b. Check for leaks.
- c. Tighten up all fittings.
- d. Replace kinked or damaged tubing.
- e. Check Rinse and Sample sensors.
- f. Check all valves and replace if necessary,

**Feature: QC Test**

- a. Set the instrument to run 5 random water samples each sample will be setup in random locations.
- b. Set the instrument to use the customer's specific methods
- c. Start the measurement and verify all samples are measured properly and the system cleans fully in-between each sample load.

**Feature: Final Inspection**

- a. Check that all components are tight and secure.

**Feature: Database Backup**

- a. A backup of the database is performed and saved on the local C:\ drive.

<b>Operator: (Print)</b>		<b>Operator: (Signature)</b>		<b>Date:</b>	
<b>Reviewer: (Print)</b>		<b>Reviewer: (Signature)</b>		<b>Date:</b>	