ABBOTT ADD	INDEX TECHNICAL SERVICE BULLETIN

PRODUCT: **ALCYON (TM) 300 Rev 0 (121)**	DATE: **23-SEP-98**

TSB #	IMPLEMENTATION	SUBJECT	EFFECTIVITY DATE
121-002	N - SN 1831 & below	ALCYON (TM) Rev. 0 Software Release Ver. 261095/0142	PENDING
121-001	N - See TSB	Modified Wash Pump with New O-ring	07-OCT-97

PENDING -	TSB index number has been reserved for a future TSB.
CANCELLED -	TSB index number is cancelled.
INCORPORATED -	TSB was incorporated into another document or manual.
OBSOLETE -	TSB no longer applies.
COMPLETE -	TSB implementation is complete.

END OF DOCUMENT

ABBOTT ADD	TECHNICAL SERVICE BULLETIN

SUBJECT:
Modified Wash Pump with New O-Ring

TSB#: **121-001**

ORIGINATOR: **Gary Tompkins/Bernard Dabosi**
APPROVED: **Christie McCain 9/21/98**

PRODUCT:
ALCYON (TM) 300 Rev 0 (121)

REF. ECO: **Alcyon, France M160**

IMPLEMENTATION:
- ○ **Immediate**
- ● **Next Service Call**
- ○ **Next Failure**
- ○ **Optional**

Instruments Requiring Modification:
1613, 1614 and 1639 through 1646

TSB Part/Kit #: **A072600B**

TSB Effectivity/
Part(s) Availability: **07-OCT-97**

TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)

- ○ YES
- ● NO

Upgrade Time: **.5 Hrs.**

Validation Time: **.5 Hrs.**

Total Mod. Time: **1.0 Hrs.**

****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

I. DISTRIBUTION:

Worldwide except for United States.

II. PURPOSE:

Assembly methods caused premature failure of the exit port fittings of the Wash Pump. This TSB directs the replacement of the entire Wash Pump, which has added o-rings to eliminate leaks and broken fittings.

III. ADMINISTRATIVE NOTES:

This TSB is to be incorporated as a NEXT SERVICE CALL upgrade of the Wash Pump, Alcyon Ref. Number A072600B (new number).

This modification should be performed in the course of normal service.

Europe: Area Customer Service, Delkenheim, should communicate to WWCS in Dallas, FAX# 972-753-3525, when the instruments in Europe and surrounding areas have been upgraded.

ROW: Area Service Managers should communicate to WWCS in Dallas, FAX# 972-753-3525, when the instruments in their respective areas have been upgraded.

IV. SPECIAL TOOLS:

No special tools required. (Metric tools are considered standard for the ALCYON Analyzer).

V. PARTS:

REPLACED PARTS:
The pumps replaced during the modification should be scrapped according to country policy.

COMPATIBILITY:
This modification is compatible with all existing Rev. 0 ALCYON Analyzers.

Any spare Wash Pump ordered as of the effectivity date of this TSB will be modified with the new o-ring and assembly techniques.

VI. PROCEDURE:

MODIFICATION STEPS:
Set-up: **Be sure to wear proper safety equipment (gloves, glasses and lab coat).**

1. Remove the water input lines & sensor from the water supply tank and short the sensors together. Perform a probe wash for 1 minute to air purge the pump and wash lines. Select
   - System Configuration/Tool Box
   - Washing Probes
   - ENTER to Begin and End
2. Power the system OFF using the key switch, then the main power switch and unplug the power cord. Place paper towels appropriately under the pump to catch any liquid when the tubing is disconnected.
3. Disconnect the inlet tubing from the top of each pump head. The barbed fittings must remain, they are secured by glue. Remove the Check Valve and save it.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

4. Unscrew the output Teflon tubing from the bottom of each pump head. The white fittings must remain, they are secured by glue.
5. Disconnect the pump power cable at connector M2.
6. Using a 8mm hex socket wrench, loosen the four screws which secure the pump and remove the pump. Retighten the four shock mounts as necessary.
7. Install the new pump by following Steps 3 through 6 in reverse order. Be sure to correctly attach the Check Valve and output and input lines.

VALIDATION:

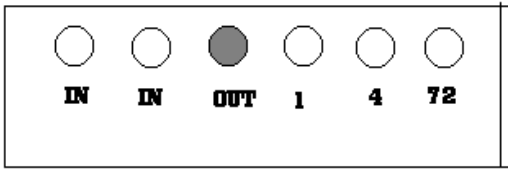
Turn the instrument ON and enter into the Reglages software. Be sure the supply tubes are in the water supply tank and the tank has sufficient distilled water in it.

1. At the Reglages main menu, select
   - J, HYDRAULIC submenu, then select
   - A, PUMP ON

   Allow to run for 1 minute to fill the hydraulic circuit while verifying there are no leaks at the pump fittings and tubing connections. Select
   - B, PUMP OFF

2. Pump Flow Check
   a) Remove the Reagent Probe from the Pre-heater but DO NOT disconnect the tubing from the probe. (Be sure to loosen thumb screw enough so the probe is not scratched while removing.)
   b) Place the probe in an clean, empty container with a capacity of no less than 50ml (>/= 50ml).
   c) Remove only the one large waste tubing (A072300A) from the waste bottle and place it in an empty container with capacity of greater than 100ml (>100ml). This tube will be used to

check the output of the sample head (combined from Sample Probe and wash well lines).



Waste tubing comes from this port (OUT) at rear of the ALCYON 300 instrument.

d) At the Reglages main menu, select
- J, HYDRAULIC submenu, then select
- A, PUMP ON to run the pump FOR EXACTLY 15 SECONDS. Then select
- B, PUMP OFF.

e) Measure the volume in the 'reagent' container. The target volume is **25ml**; the range is 25ml to 30 ml.

f) Measure the volume in the 'waste' container. The target volume is **60ml**; the range is 60ml to 80ml.

g) Return the waste tubing to waste container and the reagent probe to the probe holder when the check is complete and acceptable.

If measured volume is not correct, perform the Pump Flow Adjustment, Step 3.

3. Pump Flow Adjustment
This procedure must be performed if the volumes measured during the Flow Check were not correct.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

a) If incorrect volume from reagent head:

- If the volume from the reagent head is less than 25ml, turn the reagent flow adjustment screw (see Figure 1) in the counter-clockwise direction for 1/16 of a turn to increase the flow. Repeat the Flow Check.
- Perform the Solenoid Valve Check to verify that the valve does not leak. If the volume from the reagent head is greater than 25ml and less than 30ml but the solenoid valve leaks, turn the reagent flow adjustment screw (see Figure 1) in the clockwise direction for 1/16 of a turn to decrease the flow to 25ml. The pressure may be too high, causing the valve to leak. (More than one adjustment may be necessary.) Repeat the Flow Check.
- Repeat the Solenoid Valve Check. If the reagent solenoid valve continues to leak and the volume is right at the target value of 25ml, replace the valve (A143600B) then repeat all the checks.

b) If incorrect volume on pump sample head:

- If the volume from the sample head is less than 60ml, turn the sample flow adjustment screw (see Figure 1) in the counter-clockwise direction for 1/16 of a turn to increase the flow. Repeat the Flow Check.
- Perform the Solenoid Valve Check to verify that the valve does not leak. If the volume from the sample head is greater than 60ml and less than 80ml but the solenoid valve leaks, turn the sample flow adjustment screw (see Figure 1) in the clockwise direction for 1/16 of a turn to decrease the flow. The pressure may be too high, causing the valve to leak. (More than one adjustment may be necessary.) Repeat the Flow Check then the Solenoid Valve Check.
- Repeat the Solenoid Valve Check. If the sample solenoid valve continues to leak and the volume is right at the target value of 60ml, replace the valve (A143500B) then repeat all the checks.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

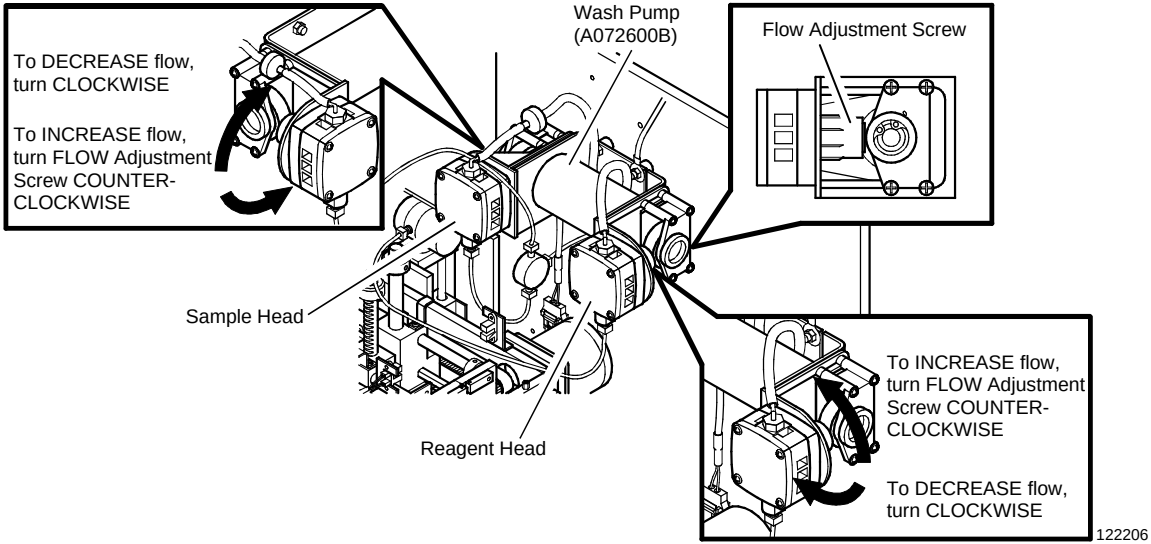


Figure 1

4. Solenoid Valve Check

   This step should be repeated after any adjustment is made to the pump flow.

   a) Reinstall the Reagent Probe into the Pre-heater.
   b) Manually move the Reagent and Sample Transfer Arm to the UP positions. Keep them above the wash well.

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c) At the Reglages main menu, select

- J, HYDRAULIC submenu, then select
- A, PUMP ON

Allow the pump to run for 3 minutes. Check for a proper probe stream in both probes. Continue to observe the pump fittings and tubing for leaks.

d) After 3 minutes, alternate opening and closing the valves every 2 seconds for a period of 10 seconds as follows:

- D, ELECTROVALVES CLOSING for 2 seconds
- C, ELECTROVALVES OPENING for 2 seconds

Repeat this 5-10 times. The probes MUST NOT LEAK when the pump is running and the VALVES are CLOSED.

[If a probe still leaks, check the appropriate circle Ts, syringe, and tubing. If probe continues to leak, replace the corresponding solenoid valve.]

e) Select

- PUMP OFF to turn the pump off.

5. Exit the Reglages software

- ESC
- ESC
- Y (YES)
- ENTER key to exit to the C:\> prompt

6. Restart the system using the key switch.

7. Complete the current service call.

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CHECKOUT:
See VALIDATION above.

MODIFICATION CONTROL STICKER UPDATE:
Mark off the #1 on the modification control sticker to indicate that TSB 122-001 has been incorporated.

END OF DOCUMENT