

 ABBOTT ADD	INDEX INSTRUMENT SERVICE ADVISORY
--	--

PRODUCT: ALCYON (TM) 300i Rev 1 (120)	DATE: 17-AUG-1999
---	-----------------------------

ISA #	SUBJECT	EFFECTIVITY DATE
-------	---------	------------------

120-018	Dual Voltage Heater	17-AUG-1999
120-017	New Sample Barcode Reader	28-JUL-1999
120-016	New Tube/Cup Sensor and PCB	12-JUL-1999
120-015	ISE Refresh Cycle Change	12-JUL-1999
120-014	New Framework, Rear Panel, and Tubing	22-JUN-1999
120-013	Alcyon (TM) System Software Ver. 1.6 Upgrade	13-MAY-1999
120-012	Ver 1.5 Software Issue in LIS Download and List /Run Modes	08-FEB-1999
120-011	ALCYON (TM) Product Changes and New ISE Maintenance Procedures	12-MAR-1999
120-010	Alcyon Passwords	12-FEB-1999
120-009	PENDING	PENDING
120-008	Alcyon (TM) CD-ROM Service Manual	15-MAR-1999
120-007	Transfer Arm Troubleshooting	10-DEC-98
120-006	ISE Electrode Holder Alignment Tool	OBSOLETE
120-005	CPU CMOS Configuration Settings	12-FEB-1999
120-004	PENDING	PENDING
120-003	Rinsing Water Container Prior to Use	21-SEP-98
120-002	Failure Analysis Parts Label	21-SEP-98
120-001	Changes to Mixer Adjustment Procedure VP-44	21-SEP-98

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

 ABBOTT ADD	INSTRUMENT SERVICE ADVISORY
--	------------------------------------

SUBJECT: Dual Voltage Heater	ISA#: 120-018
ORIGINATOR: Emil Jivan	PRODUCT: ALCYON® 300i Rev 1 (120)
APPROVED: Kathy Jennings 17-AUG-1999	EFFECTIVITY DATE: 17-AUG-1999

ALCYON® is a registered trademark of Abbott Laboratories.
--

A new type of Heater Assembly has been approved for use with the Alcyon Analyzer. The new Heater Assembly will be installed in new instruments beginning in August or September 1999. The cut-in serial numbers for this ISA are: 1986, 1987, 1993, 1994, 2126, and above
This ISA includes the following information:

- About the new Heater Assembly
- Part Number and Logistics
- When to Use the New Dual Heater Assembly
- Removal and Installation of the Dual Heater Assembly
- Verification

About the new Dual Heater Assembly

The new heater assembly works on both instrument configurations 110V and 220V. The new heater contains two separate elements of 80 ohms each. These elements can be thought of as resistors. The power entry module is used to connect the elements in either series or parallel. This creates the same nominal power in either configuration.

If the power entry module is set to:

- 220V: with 220V connected
Elements are connected in series
Equivalent resistance value of 160 ohms
Nominal power of 302 W.
- 110V: with 110V connected
Elements are connected in parallel
Equivalent resistance value of 40 ohms
Nominal power of 302 W.

Part Number and Logistics

The Part Number and contents for the new Dual Voltage Heater catalog item is shown in this table:

Part Number	Description	Qty.
2-85344-01	Heater Dual Voltage	1
2-83747-01	Relay, Reaction Temperature (DV)	1
2-83629-01	Cable, Relay Jumper	1
2-85348-01	Cable, AC/Heater	1
2-83748-01	Dual Voltage Heater Kit: Heater Dual Voltage Relay ReactionTemperature Cable, Jumper Cable, AC/Heater Clamp, Cable	 1 2 1 1 1

Note:
Parts for older instruments will be available until stock is depleted.

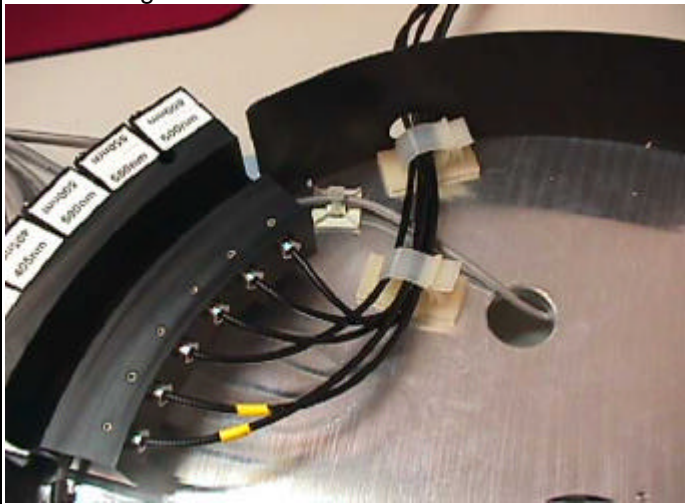
When to use a New Dual Voltage Heater/Components

- For older instruments, SN 2125 and below (with exception of SN 1986, 1987, 1993, 1994) if parts are no longer available, upgrade the instrument with the Dual Voltage Upgrade Heater Kit.
- For new instruments, SN 1986, 1987, 1993, 1994, 2126, and above, replace individual parts when the instruments are configured with the new Dual Voltage Heater.

Removal and Installation of the Dual Heater Assembly

Action		Comments
Removing Old Heater Assembly		
1	Remove all Patient Samples from Sample Carousel.	
2	Perform the Short Term Shutdown found in VP-01.	
3	Perform RR-C1.13 to remove old Heater Assembly.	Unplug Heater Assembly Cable (P203, W23) from the back of the instrument prior to removing Heater Assembly.
Heater Resistance Verification		
1	Check the resistance between the two wires, labelled P184 pin 3 and P120B RLY. Verify that the resistance measures between 76 and 84 Ohms.	
2	Check the resistance between the two wires, labelled P184 pin 4 and P121B RLY. Verify that the resistance measures between 76 and 84 Ohms.	
Installing New Heater Assembly		
1	Perform RR-C1.13 in reverse order to install the new heater.	During installation add an additional Cable Clamp to keep Colorimeter Cables away from the heater. Verify that the cables are not interfering with the heater. See Figure 1.

Figure 1



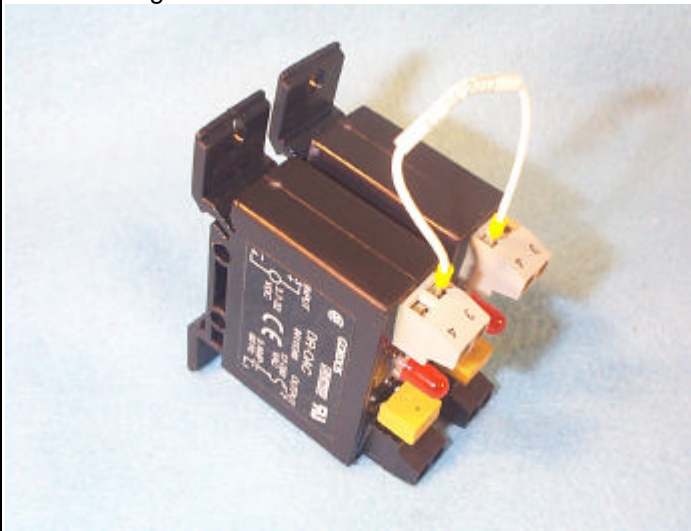
Removing Relay, Reaction Temperature

- | | | |
|---|---|--|
| 1 | Perform RR-E4.10 Relay, Reaction Temperature. | |
|---|---|--|

Installing New Relay/Jumper Cable

- | | | |
|---|--|---------------|
| 1 | Connect Jumper Cable between Terminal 3 of one Relay and Terminal 4 of the other Relay. Secure Cable by tightening the screws. | See Figure 2. |
|---|--|---------------|

Figure 2



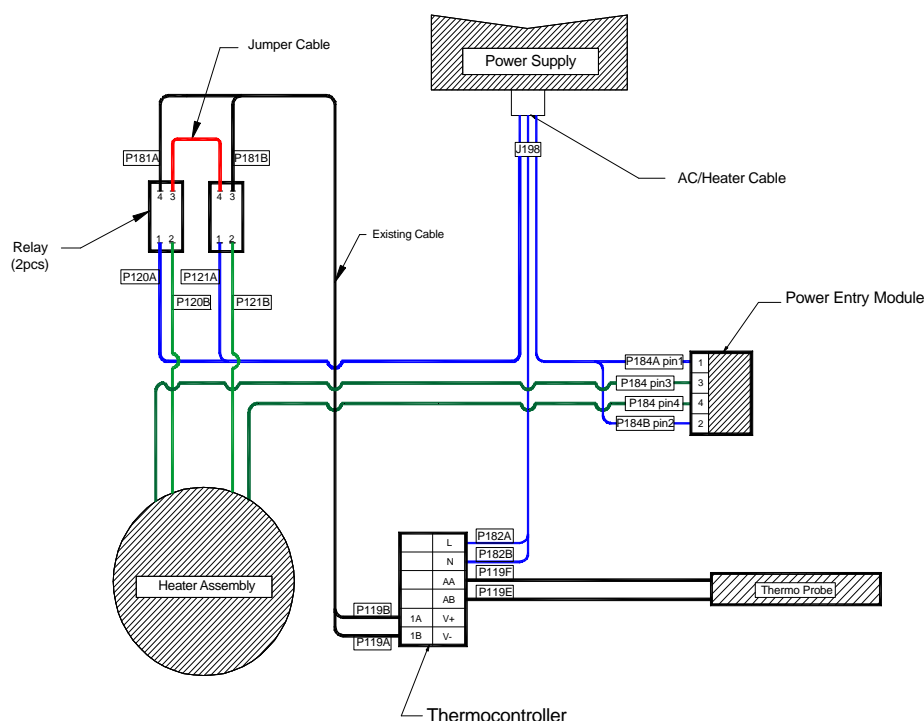
- | | | |
|---|---|---|
| 2 | Slide both Relays on the existing Relay Mounting Bracket. | The mounting method is the same as the old one. |
|---|---|---|

Replacing AC/Heater Cable

- | | | |
|---|--|--|
| 1 | Remove old AC/Heater Cable. | |
| 2 | Connect AC/Heater Cable J198 to Power Supply and then secure it with a Tie Wrap around the connectors. See Electrical Schematic in Figure 3. | Verify connection by slightly pulling the cable. |
| 3 | Connect AC/Heater Cable to Power Entry Module (PEM) as follows:
Terminal P184A pin1 to Position 1 of PEM
Terminal P184B pin2 to Position 2 of PEM
See Electrical Schematic in Figure 3. | |

4	<p>Connect AC/Heater Cable to Both Reaction Temperature Relays as follows:</p> <p>Terminal P120A to Position 1 of the Left Relay</p> <p>Terminal P121A to Position 1 of the Right Relay</p> <p>See Electrical Schematic in Figure 3.</p>	<p>Both Relays have position 1 located at the left - bottom of the Relay.</p>
5	<p>Connect AC/Heater Cable to Temperature Control Module (Thermocontroller) as follows:</p> <p>Terminal P182A to Line</p> <p>Terminal P182B to Neutral</p> <p>See Electrical Schematic in Figure 3.</p>	

Figure 3
Dual Heater Assembly Wiring Diagram



Connecting Heater Assembly Cables

1	<p>Connect Heater Assembly Cables to Both Reaction Temperature Relays as follows:</p> <p>Terminal P120B to Position 2 of the Left Relay</p> <p>Terminal P121B to Position 2 of the Right Relay</p> <p>See Electrical Schematic in Figure 3.</p>	Both Relays have position 2 located at the right - bottom of the Relay.
2	<p>Connect Heater Assembly Cables to Power Entry Module (PEM) as follows:</p> <p>Terminal P184 pin3 to Position 3 of PEM</p> <p>Terminal P184 pin4 to Position 4 of PEM</p> <p>See Electrical Schematic in Figure 3.</p>	

Reconnecting Reaction Carousel Relay Control Cable

1	<p>Connect Existing Reaction Carousel Relay Control Cable from Thermocontroller to both Relays. Connect as follows:</p> <ul style="list-style-type: none"> Terminal P181A to Position 4 of the Left Relay Terminal P181B to Position 3 of the Right Relay <p>See Electrical Schematic in Figure 3.</p>	
---	--	--

Note:

Before powering up the instrument verify that the Power Entry Module was configured correctly per the Alcyon Operations Manual.

Verification

Perform the following steps per verification procedure of the Service Manual:

- Temperature Adjustment/Verification per VP - 38.
- Basic Run per VP - 26.

END OF DOCUMENT

 ABBOTT ADD	INSTRUMENT SERVICE ADVISORY
--	------------------------------------

SUBJECT: New Sample Barcode Reader	ISA#: 120-017
ORIGINATOR: Gary Tompkins	PRODUCT: ALCYON® 300i Rev 1 (120)
APPROVED: Emile Diou 28-JUL-1999	EFFECTIVITY DATE: 28-JUL-1999

ALCYON® is a registered trademark of Abbott Laboratories.

A new type of Sample Bar Code Reader (BCR) has been approved for use with the Alcyon Analyzer. The new BCR will be installed in new instruments beginning in August or September 1999. A cut-in serial number is not available at this time.

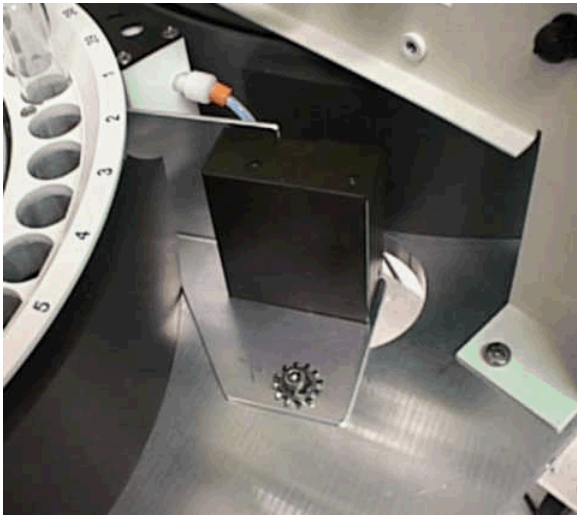
This ISA includes the following information:

- About the new Bar Code Reader
- Part Number and Logistics
- When to Use the New BCR
- Removal and Installation of the new BCR
- Replacement of Old style BCR
- Labeling Issues (Important!)

About the new Bar Code Reader

The new reader, a Charge Coupled Device (CCD) type reader (using technology similar to that used in video cameras), replaces the original laser style reader. Utilizing 32-bit microprocessor technology, the new reader is faster and more reliable. Additionally, this new device provides a cost reduction and is safer to use than the laser reader.

At this time there are no additional Bar Code features for the Alcyon Analyzer with the new CCD BCR installed.



Part Number and Logistics

The Part Number and contents for the new Bar Code Reader catalog item is shown in this table:

Part Number	Part Name	Includes	Qty.
2-82619-02	Sample Bar Code Reader Assembly, CCD	Bar Code Reader	1
		LED Conformance Label*	1
		Caution LED Radiation Label*	1
		Failure Analysis Label	1
		Cable tie	2

* = See the **Labeling Issues** section below.

The new BCR assembly comes with hard-wired cable and bracket and is downward compatible (will work on any Alcyon PC 119 or 120). *NOTE: See the "When to Use the New BCR" section below.*

Orders and forecasts should be made through normal Logistics channels.

When to Use the New BCR

- 1) Always use the new BCR in instruments which already have the new BCR. The cut-in serial number was not available at the time this document was published. You may contact the customer and verify the type of "warning" label(s) on the instrument as indicated in the "Labeling Issues" section below, which will indicate what type of reader *should* be in the Analyzer.
- 2) Additionally, the new BCR is most beneficial in situations where the original laser style reader is inconsistent or fails to interpret the customer's BC labels (particularly Blood Bank labels with very narrow bands).


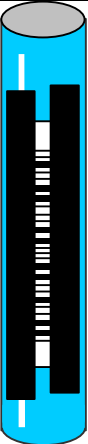
NOTE: For other cases where the original laser BCR has performed well but has simply failed, it should be replaced with the same style laser reader until FS stock is depleted. The old style laser BCR P/N remains at 2-82619-01.

Installation of the New BCR

There is only one mounting screw for the BCR bracket. The cable for the new BCR will be routed through the large hole under the BCR, then beneath the sample prcess area (using cable ties), through the hole in the back 'firewall' to connector J51 on the backplane.

When reassembling, reinstall only the carousel number ring to allow access to the BCR during the alignment procedure.

Use the procedure below to align the new style BCR.

Alignment Procedure for New Style CCD Bar Code Reader		
<i>NOTE: Perform this procedure with Sample Area Cover removed and Sample Carousel Number Ring installed in order to properly observe BCR light.</i>		
<i>NOTE: This procedure is dependent on the use of known good bar code labels of appropriate symbology (refer to Section.2 of the Alcyon® Operations Manual).</i>		
STEP	ACTION	RESPONSE
1a	Prepare an alignment tube as follows:	
1b	Place one of the customer's bar code labels on a sample tube according to the specifications in the Alcyon Operations Manual, Section 2.	
1c	Place two pieces of opaque tape (i.e., electrical or masking) vertically on the label allowing only a 1-2mm (1/16-1/8") gap of the bar code to be exposed in the center of the label.	
2	Insert the alignment tube in position 1 of the Sample Carousel with the exposed part of the BC label aligned with the number 1 on the carousel number ring.	
3	Boot-up into Diagnostics (Reglages).	
4	From the Diagnostics Main Menu, select Option L, BARCODE READERS.	The BARCODE READER sub-menu will appear.
5	At the BARCODE READER sub-menu, select Option A, SAMPLE BARCODE READER ADJUSTMENT AND TEST.	Both Transfer Arms will be automatically raised and the Sample Carousel will initialize. The BARCODE READER TEST SAMPLES screen will appear.
6	Press '4' to select COM4 for "RS232 used:".	COM4 will be displayed for "RS232 used:" at the top of the display.

7	Press 'a' to turn the bar code light ON.	The BCR light will not be a single thin line as with the laser style BCR, but will be a large, red 'blurred' pattern.
8	Loosen the BCR mounting screw and align the device until it reads the label. (It will beep and display the label number.) The front to back (focal length) position is not critical. Tighten the mounting screw.	It will read only once then the BCR light will extinguish.
9	Verify the tube can be read consistently by alternately pressing 'a' and 'b'. See NOTE at right. Verify that the tube's number is correctly displayed.	<i>NOTE: You may alternately press 'a' and 'b' to repeatedly read a BC label at the read position. Even if the light is already OFF, 'b' must be pressed before the light will turn ON again.</i>
10	Move the alignment tube to position 2, aligning the exposed part of the BC label to the number 2 on the carousel. Press 'c' to advance the carousel one position. Verify that the BCR reads the label and displays the correct label number. If not, realign the BCR until it consistently reads the label.	The BCR should immediately read the label on the tube and show the label number in the position 2 slot on the display.
11	Load several more normally labeled sample tubes (with labels specific to that customer site) into the carousel at random positions.	Assure that the labels are applied per the Operations Manual and that the center of the BC labels aligns with the number on the carousel when inserted.
12	Press 'd' to run the "dynamic read mode".	The Carousel will turn, stopping at each position to read a label if present.
13	As the Carousel rotates, verify that each position that has a label is read and the correct label number is displayed for that position. After verify proper operation, press any key to stop.	If any labels don't read or misread, realign the BCR as necessary or consider the quality and/or application of the customer's labels.
14	Turn system power OFF and reinstall the Sample Area Cover and number ring.	<i>NOTE: When installing the number ring screws, after inserting a screw into a hole, first slowly turn it counter-clockwise until it properly 'seats'. Then, proceed to tighten it. This will help to keep the screw from cross-threading.</i>
15	Complete the Total Service Call procedure.	

Replacement of the Original Style BCR


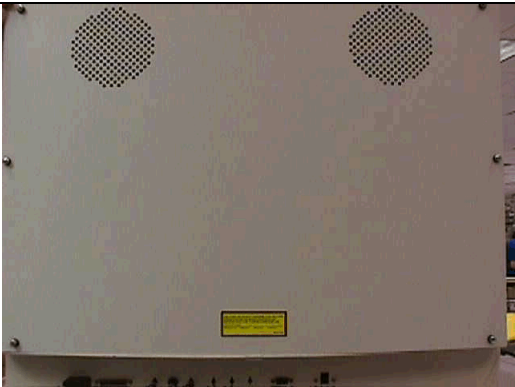

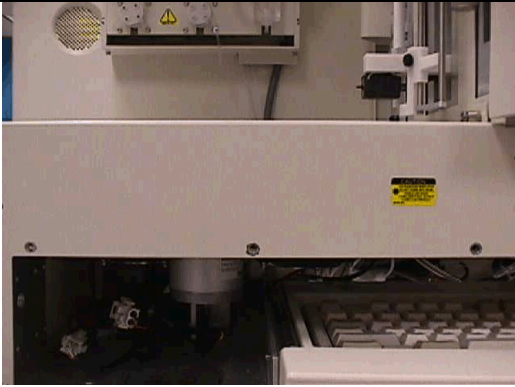
Refer to RR - B4.5 in the Alcyon® Service Manual to remove the old BCR. Refer to the **Removal and Installation of the New BCR** section above for installation instructions for the new BCR.

IF THE NEW BCR IS REPLACING THE OLD STYLE LASER READER (2-82619-01), THE YELLOW LASER WARNING LABELS MUST BE CHANGED AS NOTED IN THE **Labeling Issues** SECTION BELOW.

Labeling Issues

There are two BCR associated warning/safety labels on every Alcyon® Analyzer, located as shown in the pictures below. Because of the differences in technology (LED vs laser), different safety labeling applies. When the new style CCD BCR replaces an older laser style reader, the two original laser labels must be replaced using the LED labels shown below.

It is VERY IMPORTANT that the new labels be applied as shown to ensure that the labeling on the Analyzer matches the type of BCR in the system, and meets the necessary Safety and Regulatory requirements.

<p align="center">LABELS FOR NEW STYLE CCD BARCODE READER</p> <p>Remove the two old style labels in the locations shown below and replace with the following labels.</p>	
<div><p>THIS CLASS I LED PRODUCT CONFORMS TO IEC-825-1(1993) DIESES LED-PRODUKT DER KLASSE 1 ENTSPRICHT DER NORM IEC-825-1 (1993) CE PRODUIT LED DE CLASSE 1 EST CONFORME A LA NORME IEC-825-1 (1993) ESTE PRODUCTO LED DE LA CLASE 1 ES CONFORME A LA NORMA IEC-825-1 (1993) QUESTO PRODOTTO LED DI CLASSE 1 È CONFORME ALLA NORMA IEC-825-1 (1993)</p><p>MANUFACTURED: _____ HERGESTELLT AM: FABRIQUÉ LE: FABRICADO EL: PRODOTTO IL: _____</p><p align="right">(84121-101)</p></div> <p align="center"><i>LED Conformance Label</i></p> <p>Attach this label as shown ----->>>>>>> Bottom center of rear panel (either style)</p>	
<div><p>CAUTION LED RADIATION WHEN OPEN DO NOT STARE INTO BEAM VISIBLE LED DIODE 1.0 MILLIWATT MAX. OUTPUT CLASS 2 LED PRODUCT (84124-101)</p></div> <p align="center"><i>Caution LED Radiation Label</i></p> <p>Attach this label as shown ----->>>>>>> Sample Area Cover, behind front bezel (as shown)</p>	

 **ABBOTT
ADD**

INSTRUMENT SERVICE ADVISORY

SUBJECT: New Tube/Cup Sensor and PCB	ISA#: 120-016
ORIGINATOR: Gary Tompkins	PRODUCT: ALCYON® 300i Rev 1 (120)
APPROVED: Chrisite McCain 12-JUL-1999	EFFECTIVITY DATE: 12-JUL-1999

ALCYON® is a registered trademark of Abbott Laboratories.

Beginning with Serial Number 1940, a new Tube/Cup Sensor and Tube/Cup Sensor PCB were incorporated into the Alcyon Analyzer. The new Tube/Cup Sensor provides a significant cost reduction and is much easier to adjust than the old style Detector and Controller.

Compatibility/Part Numbers

The new Tube/Cup Sensor and PCB are downward compatible. That is, as a set, these parts can be installed on instruments prior to S/N 1940 once catalog stock is depleted of the old Detector and Controller. The new parts will be available as catalog items as noted below.

- NOTE:
- The *new* PCB CANNOT be used with the *old* Detector.
 - The *new* Sensor CANNOT be used with the *old* Controller.

Item	New	Old
Tube/Cup Sensor (includes cable)	2-83179-01	2-85264-01
Tube/Cup Sensor PCB (w/PCB standoffs)	2-85090-01	
Controller (old)		2-83416-01
Standoff, PCB (quantity 2)	2-83736-01	N/A
NOTE: New and old parts CANNOT be mixed.		

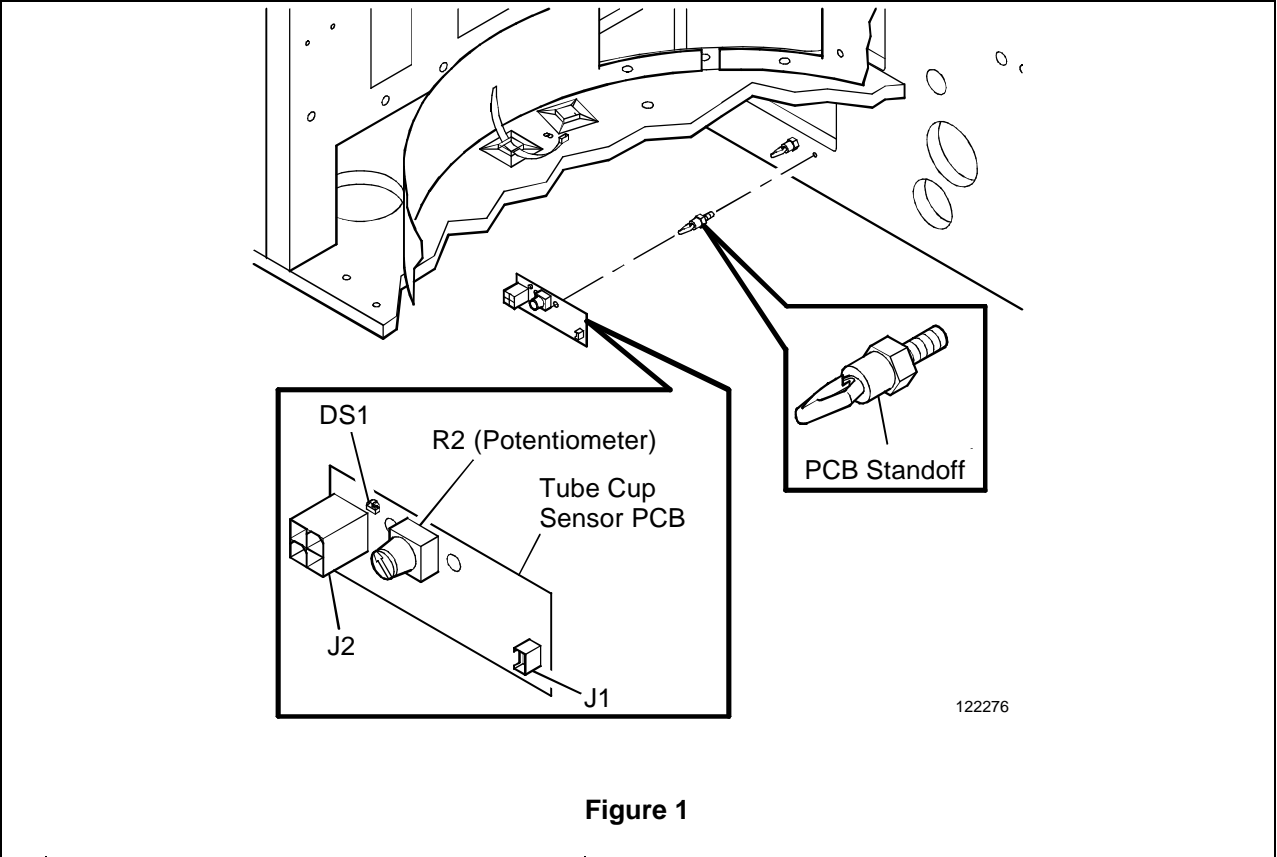
Information

The new sensor is a reflective infrared emitter/detector. It is mounted on a post where the old style fiber optic detector was located. The sensor is directed toward the position being sampled on the Sample Carousel. The sensor is connected to the new PCB, which supplies current to the emitter and amplifies the output of the phototransistor.

The PCB is mounted in the same place as the previous controller unit and is mounted on two plastic standoffs. Adjusting the sensitivity of the circuit does not require a tool. A single-turn thumbscrew style potentiometer is used. The PCB allows adjustment of the amplifier gain to compensate for sensor variability before the photodetector output is converted to digital signal.

Replacing old style Detector and Controller and/or Installing the new Sensor and PCB

	Action	Comment
Removing old style Detector & Controller		
1	Perform the Short Term Shutdown found in VP-01.	
2	Perform RR-C1.19 to remove old Tube/Cup Detector Controller.	Leave 4-conductor cable from Backplane in place. Same cable will be used for new PCB. Do not disconnect the Keyboard.
3	Remove Tube/Cup Detector Controller mounting bracket (2 screws).	2.5 mm hex wrench required.
4	OPTIONAL: Remove Sample Tube Carousel (number ring) and Sample Area Cover (refer to RR-B3.4).	Remove these items if Detector mounting hole at top side of process plate cannot be accessed as needed in following steps.
5	Loosen Tube/Cup Detector adjustment screw.	1.5mm hex wrench required. Refer to Figure 3.
6	Pull Detector optic fibers from cable tie and remove Detector up through top side of process plate.	
Installing New Sensor & PCB		
1	Install two plastic PCB standoffs included with Tube/Cup Detector. See Figure 1.	Standoffs screw into existing holes used previously for old Controller bracket.
2	Install PCB onto standoffs.	Snap the PCB onto the standoffs through the holes at each side of the potentiometer R2.
3	Attach cable (P166) from Backplane to PCB at J2. It may be necessary to cut cable tie to allow cable/connector to reach PCB.	Refer to Figure 1.



4	Insert connector end of new Sensor cable through mounting hole from top side of process plate until Sensor is FULLY SEATED in mounting block. Slightly tighten adjustment screw.	Refer to Figure 2. 1.5mm hex wrench required.
5	Attach Sensor cable connector to PCB at J1. Appropriately secure cable with cable tie at underside of process plate.	Refer to Figure 1.
6	If previously removed, install Sample Tube Carousel (number ring) with only two or three screws. Do not install Sample Area Cover at this time (if previously removed).	<i>NOTE: To avoid cross-threading screws, insert screw(s) and first turn counter-clockwise until screw is seated, then proceed to tighten (clockwise).</i>

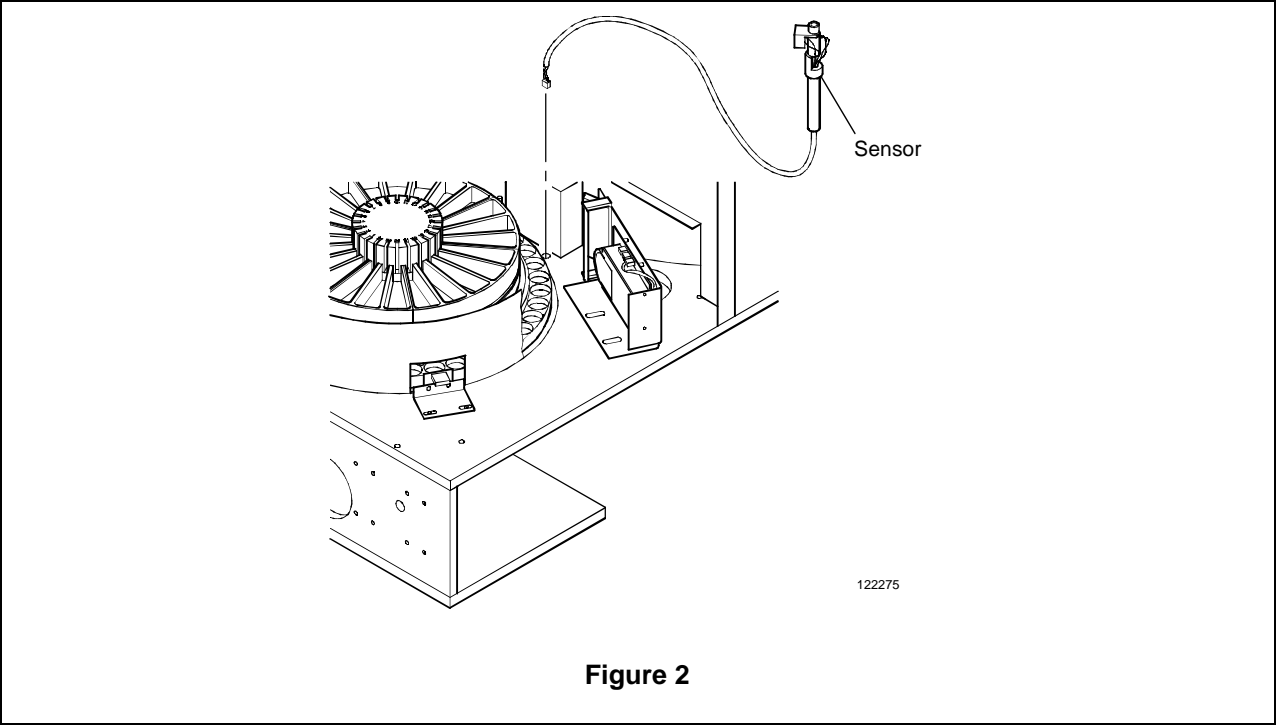


Figure 2

Adjusting New Tube/Cup Sensor

1	Turn Analyzer power ON and select Option 2, Diagnostics, at the Start Up Menu.	
2	Once at the Diagnostics main menu, manually raise both Transfer Arms. Select Option E, Sample Wheel, then manually rotate the Sample Carousel to access position 38.	
3	Insert a clean, empty glass sample tube into position 38 of Sample Carousel and select Option A, Wheel Initialisation.	This will place position 38 at the 'sample station'.
4	Loosen the Sensor assembly adjustment screw. <i>NOTE: DO NOT ADJUST PRESET SCREW. THIS IS A FACTORY SET ADJUSTMENT. See Figure 1.</i> Rotate assembly so Sensor is pointing directly at tube in position 38 and tighten the adjustment screw.	Refer to Figure 3. Refer to Figure 3. <i>NOTE: There will be no visible light as this is an infrared sensor.</i>
5	Adjust the potentiometer R2 on the PCB until the LED DS1 is a half brilliance. (Rotate R2 back and forth until visual verification of approximately half the LED brilliance range.) Verify that the TUBE/CUP status indicator on the screen (lower right) shows TUBE.	Refer to Figure 1. If the status indicator does not show TUBE, readjustment of the potentiometer, R2, may be necessary. Also, verify that cable to Backplane is securely plugged into PCB.

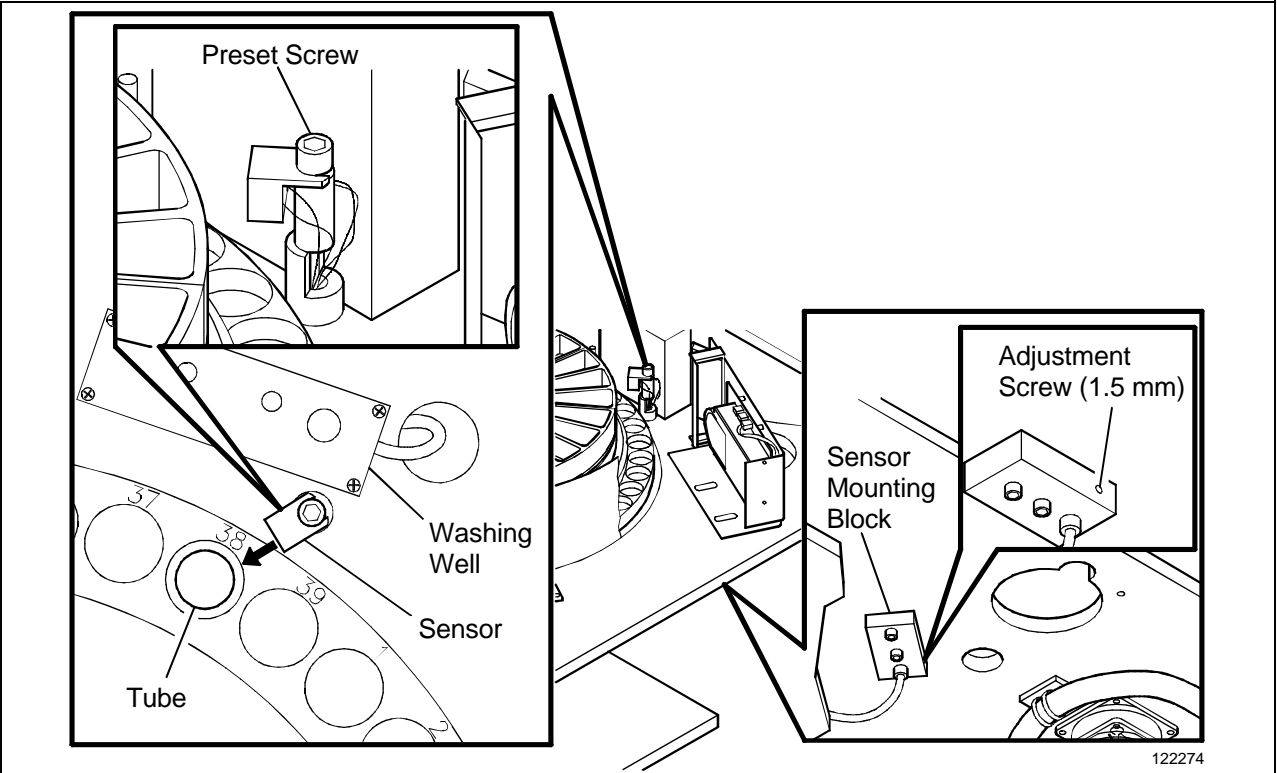


Figure 3

6	Remove the sample tube and verify that the TUBE/CUP status indicator changes to CUP. Repeatedly insert and remove the tube, while verifying that the status indicator reflects the proper condition, TUBE or CUP (no tube).	<p>If the status indicator does not show CUP:</p> <p>1) verify all cables are attached at PCB</p> <p>2) readjust potentiometer R2 as necessary</p> <p><i>NOTE: CUP should always be indicated if a tube is <u>not</u> in place.</i></p>
7	If proper conditions are observed, proceed to Verification section. Otherwise, readjust position of Sensor.	

Verification

	Action	Comment
1	Install 12-15 sample tubes on the Carousel at random positions.	
	Perform Option F, DYNAMIC TEST TUBE/CUP, from the Sample Wheel menu. The system will randomly read the Carousel positions and display the number of TUBE or CUP reads for each position in the results table. (See NOTE at right.)	NOTE: In the table displayed on the screen, the Carousel position numbers are not correct after position 13. Refer to Figure 4 below showing the correct Carousel positions for the DYNAMIC TEST results table.
2	Observe that positions that have tubes show numbers <u>only</u> in the TUBE row and positions without tubes show numbers <u>only</u> in the CUP row. (See NOTE at right.)	NOTE: A single position should never show numbers in both the TUBE and CUP rows. If so, readjust the Sensor accordingly and repeat the Verification.

(continued)

EXAMPLE of DYNAMIC TEST results table
with CORRECT position numbers

(NOTE: This graphic does not match what is displayed on the screen. The screen shows incorrect "Position" numbers after Position 12. This graphic shows the correct "Positions".)

Position	1	2	3	4	5	6	7	8	9	10	11	12	13
TUBE?		2	1	4				1		3			1
CUP?	1				3	1	1		1		1	2	
Position	14	15	16	17	18	19	20	21	22	23	24	25	26
TUBE?		1				3	1				1		
CUP?	4		1	1	1			1	1	2		1	2
Position	27	28	29	30	31	32	33	34	35	36	37	38	39
TUBE?	1							2	1			1	3
CUP?		1	2	1	3	1	2			1	2		

Figure 4

Verification (continued)

3	Once determined that the DYNAMIC TEST is performing properly, press any key to stop the test.	
4	Turn system power OFF.	
5	If Sample Tube Carousel (number ring) and Sample Area Cover were previously removed, reinstall those parts.	
6	Complete Total Service Call.	As always, run controls to assure proper operation of the Analyzer.

 ABBOTT ADD	INSTRUMENT SERVICE ADVISORY
--	------------------------------------

SUBJECT: ISE Refresh Cycle Change	ISA#: 120-015
ORIGINATOR: Gary Tompkins	PRODUCT: ALCYON® 300i Rev 1 (120)
APPROVED: Christie McCain 12-JUL-1999	EFFECTIVITY DATE: 12-JUL-1999

ALCYON® is a registered trademark of Abbott Laboratories.
--

- This ISA informs the Field of the following aspects regarding the changing of the ISE refresh cycle:
- Purpose
 - Symptoms
 - ISE Solution Usage Rates
 - ISE Maintenance
 - Customer Notification
 - Procedure

Purpose

Many customers have, and continue to experience symptoms caused by the migration of ISE Reference Solution into the electrode train during idle periods, shocking the electrodes and affecting ISE results.

In order to address this issue, *for customers experiencing specific ISE related complaints*, an ISE parameter change will be implemented to reduce the cycle time for the refresh from 3.75 minutes to 1 minute. This process takes no more than 5-10 minutes, and will be performed **ONLY** by an Abbott representative (FSR, TSS, or PTSS).

NOTES: When released, Alcyon System Software Version 1.7 will implement this reduced refresh cycle time on all Alcyon Analyzers.

Symptoms

If any of the symptoms listed below occur, perform the accompanying procedure to change the refresh cycle from 3.75 minutes to 1 minute:

- Decreased or Increased patient/control results
- Instability of calibrations, controls, or patient results

ISE Solution Usage Rates

When this procedure is performed the Stabilizing Solution usage will increase to approximately 8 mL/hour in idle mode, see table below:

24 hours	approximately 192 mL	1/8 of Stabilizer bottle
72 hours	approximately 576 mL	1/2 of Stabilizer bottle

The Reference Solution usage rate will increase slightly. The usage rate of Stabilizing Solution for sample analysis will not change.

- If the Analyzer will be idle for up to 3 days, ensure full bottles of both Stabilizing and Reference solutions are on board.
- If the Analyzer will be idle for longer than 3 days (72 hours), ensure that full bottles of both solutions are placed on board every 72 hours, or follow the ISE Shutdown Procedure in Section 2, Installation Procedures and Special Requirements of the ALCYON® Operations Manual.

ISE Maintenance

The revised ISE Maintenance procedures released in February, 1999, specify that an ISE Conditioning Cycle be performed at the beginning of the processing day and an ISE Deproteinizing Cycle be performed at the end of the processing day. These procedures are accomplished by executing two “Cleaning Cycle” commands using the appropriate solutions in large reagent containers. Each cycle takes approximately 26 seconds.

The ISE refresh cycle command, which will now be issued every 60 seconds (upon completion of this Technical Bulletin), has a higher probability of “interrupting” the conditioning and deproteinizing cycles.

Therefore, it is recommended that the conditioning or deproteinizing cycles be performed *immediately following the refresh cycle* (i.e., as soon as the ISE Cleaning Procedure window indicates it is finished). This will allow the maintenance cycle to complete before the next refresh cycle.

Customer Notification

The attached **refresh.pdf**, is a Customer Letter describing the ISE refresh cycle changes. Please print and provide a copy of this letter to your customer and explain to them the details of the letter.

If a signed copy of the customer letter is needed, Abbott employees in the US, may leave a message on VoiceCom Depot (1-800-384-4233) mailbox # 518-6222 with a contact name, phone #, and fax #. International FSEs should contact their local country office.

Procedure

Step	Action	Response
1	From the Main Menu, press <F5>.	The Analyzer prompts for the Level 1 password
2	Enter the Level 1 password (Found in Appendix E, Passwords of the ALCYON® Operations Manual) and press <Enter>. <u>Current Passwords:</u> July: RJQWM August: PIQXO September: MHRZR October: KHSBV November: IGSDZ December: GGTFD	The Development Menu is displayed.
3	Select 8-ISE Parameter Setup and press <Enter>.	ISE parameter menu is displayed
4	Move the cursor to: Waiting for a delay (3780) 16200 NOTE: The number in parenthesis is the “old” delay value; the number to the right is the “current” delay value.	Cursor is positioned under the "current" delay value of 16200.
5	Change the "current" delay value to 4303 and press <F10> to confirm.	The Analyzer prompts for the Level 2 password.
6	Enter the Level 2 password (Found in the ALCYON Troubleshooting Guide) and press <Enter>. <u>Current Passwords:</u> July: PHPVL August: MHQXO September: KGQYR October: IGRAU November: GFSCY December: EFTFC	The Development Menu is displayed.
7	Verify the change by pressing 8-ISE Parameter Setup and ensure the screen displays as follows: Waiting for a delay (16200) 4303	Screen displays as noted.
8	Press <ESC> twice to return to the Main Menu.	Main Menu is displayed.
9	Perform Shutdown Procedure.	Instrument powered OFF.
10	Perform Power On Procedure.	Instrument powered ON.

11	Perform instrument verification: Run ISE Calibration. Run Controls. Perform 18 aspiration precision run on ISE assays.	Assures satisfactory ISE performance.
12	Documentation in WWCMS, WWCMS Lite, or other local Call Management System. "Technical Bulletin # 1037-1999 has been completed." "Performance verifications acceptable." "Customer letter reviewed with operator."	Tracking of completion of Technical Bulletin.

END OF DOCUMENT

ABBOTT LABORATORIES

Diagnostics Division

1921 Hurd Dr.
P.O.Box 152020
Irving, Texas 75015-2020

July 1, 1999

Dear Abbott ALCYON® Customer:

An adjustment to the ISE Stabilizing and Reference Solution Cycle Time was performed by your Abbott Representative today.

Two areas will be affected with this change.

1. ISE Solution Usage Rates

The ISE peristaltic pumps (reference and wash) will perform a refresh cycle/rotation at approximately 1 minute intervals, when the Analyzer is in idle mode. Prior to this change, the pumps rotated at approximately 3.75 minute intervals.

The Analyzer will now utilize a greater amount of Stabilizing and Reference Solutions.

If the Analyzer will be idle for up to 3 days (72 hours), ensure that full bottles of both solutions are placed on board. If the Analyzer will be idle for longer than 3 days (72 hours), verify full bottles of both solutions are on board on Day 3, **or** follow the **ISE Shutdown Procedure** in *Section 2, Installation Procedures and Special Requirements* of the **ALCYON Operations Manual**.

2. ISE Maintenance Techniques

The revised ISE Maintenance procedures released in February, 1999, specify that an **ISE Conditioning Cycle** be performed at the beginning of the processing day and an **ISE Deproteinizing Cycle** be performed at the end of the processing day. These procedures are accomplished by executing two "Cleaning Cycle" commands using the appropriate solutions in large reagent containers. Each cycle takes approximately 26 seconds.

The ISE refresh cycle command, which is now being issued every 60 seconds, has a higher probability of "interrupting" the conditioning and deproteinizing cycles.

ALCYON® is a registered trademark of Abbott Laboratories.
Part Number: 84150-101

Therefore, it is recommended that the conditioning or deproteinizing cycles be performed immediately following the refresh cycle (*i.e.*, turning of the ISE pumps). This will allow the maintenance cycle to complete before the next refresh cycle.

Abbott Diagnostics Division continues to work to ensure the highest quality Clinical Chemistry systems available. We appreciate your continued confidence in the ALCYON Analyzer.

If you have questions or concerns, please contact your local Abbott Diagnostics Technical Support Organization. In the US, contact the Customer Support Center at 1-800-527-1869.

Sincerely,

Walter Miltimore
Clinical Chemistry Quality Manager

 ABBOTT ADD	INSTRUMENT SERVICE ADVISORY
--	------------------------------------

SUBJECT: New Framework, Rear Panel, and Tubing	ISA#: 120-014
ORIGINATOR: Gary Tompkins	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Christie McCain 22-JUN-1999	EFFECTIVITY DATE: 22-JUN-1999

ALCYON (TM) is a trademark of Abbott Laboratories.

To reduce manufacturing costs, the Alcyon framework has been changed. The changes most affect the rear panel. Additionally, changes were made to the internal and external tubing, DI Supply and Waste tanks and DI Water sensor. The new Framework was incorporated in the Factory beginning with Serial Number 1927.

The chart below summarized the changes.

Item	Purpose	Other Benefits	Comments
Redesigned rear panel	Cost reduction.	Easy to remove panel for Service.	Uses 8 captive 1/4-turn twist-lock screws.
"Slide-out" mounting for Power supplies	Provides support when removing power supplies since redesigned framework no longer allows access to top of power supplies.	Allows service access to power supplies.	Support brackets on each side of power supplies to hold them when detached from center wall.
Relocation and redesign of tubing ports on rear panel and use of color-coded tubing ports/ connectors	Provides easier access for installation and maintenance of external tubing.	Increases user-friendliness and reduces risk of incorrect connections.	Connections moved to one side of rear panel and are now luer-lock type. These cannot be used on old style rear panels.
New external tubing with color-coded connectors	Provides matching color-coded tubing connectors for corresponding ports on new rear panel and new containers.		The older tubing will no longer be available. To use the new tubing on an old style rear panel, simply remove the colored connectors.
Shorter inside tubings from Wash and Waste Pumps to rear panel and ISE Wash Pump to rear panel	Longer lengths not required due to new location of the tubing ports.		These shorter lengths will NOT be cataloged. Use original tubings cut to desired lengths. (Affected parts - 2-83313-01, 2-83320-01, and 2-83304-01.)
New DI Water Gage (float type)	Cost reduction	LLS Cable disconnects from Gage for ease of maintenance	Sensor assembly will fit water cubes when using provided cap. Adjustable.
New Waste Container (Water/Waste) and caps	For adaptation of new float type Water Gage	Adapts to water cube with provided cap	

Each colored tubing port at the rear panel has been cataloged as shown below and will be reflected in the next release of the FRU Database CD ROM. Orders and forecasts for these parts should be placed through normal logistics channels.

Color	Port	Cat. Number	Qty	Comment
Blue	IN (2)	2-83738-01	1 ea.	3 pieces make up this part
Black	OUT	2-83739-01	1 ea.	3 pieces make up this part
White	1	2-83740-01	1 ea.	3 pieces make up this part
Yellow	4	2-83741-01	1 ea.	3 pieces make up this part
Red	72	2-83742-01	1 ea.	3 pieces make up this part



Blue (IN) Blue (IN) Black (OUT) White (1) Yellow (4) Red (72)
(Shown without external tubing connected)

The List Numbers for the new **external** tubings are as shown. Orders and forecasts for these parts should be placed through normal logistics channels.

Tubing/Function	Rear Panel Port Designation	NEW List Number	OLD List Number/ Comment
ISE - Tubing 4-4 (waste)	72	05D21-02	05D21-01
ISE - Tubing 72-72 (waste)	4	05D23-02	05D23-01
Tubing - Waste	OUT	05D27-02	05D27-01
Water Container Level Sense Tubing	IN (x2)	01G78-01	DI Water tubing (2); attach to IN ports at rear panel. Have blue connectors which can be removed if used for old style rear panels.

Other new part numbers (see pictures below). Orders and forecasts for these parts should be placed through normal logistics channels.

New Part	List Number	Comment
Water Gage (<i>new float type</i>)	05D01-02	Includes Gage, LS Cable, large and small Caps, and two IN line tubings with blue fittings. Gage height is adjustable and may be used with any water container. Old Water Gage is no longer available.
Water/Waste Container (2) (<i>new type</i>)	05D26-02	Original containers no longer available. Deeper than original container. Must use new Cap (01G81-01) in order to use new Water Gage (05D01-02). May use <i>old</i> Water Gage (05D01-01) with the new Water container.
Water Container Level Sense Cap	01G81-01	Cap with hole in it for new Water Gage.
Waste Container Cap	01G80-01	Cap with 3 color-coded ports for the 3 waste tubes.
Water Container 70mm Cap	01G79-01	Cap without hole for Water Gage. (Optional)
Stabilizing Solution /Cap and Tubing	05D22-02	Was 05D22-01. The 90 degree fitting at the cap has been removed. The tubing line now attaches directly to the 'straw' which has a molded angle above the cap.



New style waste cap with colored connectors



New DI Water Container and new Water Gage and Cap (same new style container for Waste)

END OF DOCUMENT

 **ABBOTT
ADD**

INSTRUMENT SERVICE ADVISORY

SUBJECT: Alcyon (TM) System Software Ver. 1.6 Upgrade	ISA#: 120-013
ORIGINATOR: Gary Tompkins	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Christie McCain 13-MAY-1999	EFFECTIVITY DATE: 13-MAY-1999

ALCYON (TM) is a trademark of Abbott Laboratories.

This ISA addresses the release of Alcyon Analyzer Software Version 1.6 and provides the following information:

Section	Item	Page
Section 1	Administrative Notes	1-2
Section 2	Summary of Changes	2
Section 3	Software Upgrade Components and Compatibility Issues	3
Section 4	Detailed Description of Changes (as compared to Ver. 1.5)	4-15
Section 5	Software Installation and Verification	16

Section 1 - Administrative Notes

- Software Version 1.6 is a MANDATORY customer-installable upgrade addressing a variety of issues, including Year 2000 (Y2K) compliance.
- Serial numbers requiring this upgrade in the Field are as follows: 1000 through 1918, excluding 1616 through 1619, which were upgraded in the Factory.
- This software is expected to be customer-installed. Field Representatives should verify installation of software during next service call and if not installed, perform the upgrade per the instructions provided in this ISA. At any time, verification of the software version can be done by having the customer check through the Maintenance Menu.
- In addition to new software, an Alcyon Literature Upgrade Package will be automatically shipped to existing customers. This Update includes a Customer Letter regarding Ver. 1.6 software, an updated Operations Manual (text only), and updated Alcyon Quick Reference Guide.
- The following documents have been revised to correspond with Ver. 1.6 and may be ordered using the noted List Numbers:

Basic Operator Training Manual

7D34-04

Host Interface Specification

4E91-03

Analyzer Maintenance Log

7D35-04
- Alcyon WWCSE recommends the addition the System Software Ver. 1.6 Disks, LN4E73-04, to Field Service Kits. Orders must be placed through normal Logistics channels by each Country/Area.

- International:**

The appropriate quantities of Alcyon System Software Disks and Literature Upgrade Kits will be sent to each Country/Area Distribution Center. Each Country/Area will be responsible for translation of the customer letter and installation instructions, and for the installation of the software and distribution of the documentation to their customers.

- U.S.A.:**

The Alcyon System Software and Literature Upgrade Kits will be shipped directly to each customer site for installation by the customer.

Section 2 - Summary of Changes

Item Addressed by Software Ver. 1.6	Purpose	See Page
Compliance		
Y2K Compliance	<i>Correction</i>	4
Search, Sort and Deletion by date range across centuries	<i>Correction</i>	4
Searching for Archived files by date	<i>Correction</i>	4
Operations		
Patient results will now flag HIGH/OK/LOW based on Ref. Range	<i>Enhancement</i>	5
Normal Range now displayed on report	<i>Enhancement</i>	5
Patient report enhancements	<i>Enhancement</i>	5
Results print with appropriate decimal values	<i>Correction</i>	5-6
Corrupt Worklist issues	<i>Correction</i>	7
Pressing <Enter> too quickly issues	<i>Correction</i>	7
ISE		
ISE screen changes to accommodate updated Maintenance procedures	<i>Routine change</i>	8
Reference Solution diffusion into Na+ electrode	<i>Improvement</i>	8
LIS		
Capability of using leading zeros for all bar code symbologies	<i>Enhancement</i>	9
SIDs now increment correctly with leading zeros in batch mode	<i>Correction</i>	9
LIS/Download issues with current carousel	<i>Change</i>	10
LIS Mode screen now displays complete message at top of screen	<i>Correction</i>	11
List Run screen now displays 20 characters	<i>Correction</i>	11
SIDs uploaded to host with test results	<i>Enhancement</i>	11
Controls		
Control Screen display issues	<i>Correction</i>	12
Mean in Control Results screen now matches graph	<i>Correction</i>	12
Control Results no longer incorrectly flagged out of range	<i>Correction</i>	13
Probability of CT0 on blank Control Reports greatly reduced	<i>Correction</i>	13
Profiles and Ratios		
Warning message when modifying Reagent Carousel	<i>Enhancement</i>	13
Ratio and Profile Selection boxes now update correctly	<i>Correction</i>	14
Ratios now remain selected when modifying Patient File	<i>Enhancement</i>	14
Results		
Results with CAL error now print/display with blank spaces instead of 0.0	<i>Change</i>	14
"All tests complete" banner message now optional	<i>Correction</i>	14
Other Issues		
Screen Saver still INACTIVE	<i>No change</i>	15
Instruction given to run urine dilutions on controls	<i>No change</i>	15
Foreign Language Issues	<i>No change</i>	15

Section 3 - Software Upgrade Components and Compatibility Issues

As shown in the table below, two List Numbers contain all the necessary components for the Ver. 1.6 software upgrade. The documents listed below cannot be ordered separately unless otherwise noted.

Part Number	Description	Quantity
LN 4E73-04	Alcyon System Software Ver. 1.6	1
	Includes:	
	Alcyon System Software Ver. 1.6 Disk 1	1
	Alcyon System Software Ver. 1.6 Disk 2	1
	Customer Letter ¹	1
	Installation Instructions ¹ (English only)	1
	Change Description Document	1
	Product Information Letter	1
LN 1G05-01	Alcyon Literature Upgrade Kit ⁴	1
	Includes:	
	Customer Letter ¹ (English only)	1
	Alcyon Operations Manual Update ² (text only; English only)	1
	Alcyon Quick Reference Guide (updated) ³	1
<div><div>¹ Installation Instructions and Customer Letters will be translated, packaged and distributed, as necessary, by each Country office.</div><div>² The 'text only' update cannot be ordered separately. The complete Alcyon Operations Manual (binder, tabs, text, etc.) may be ordered, as required, using LN 5D93-04.</div><div>³ Extra copies of the Alcyon Quick Reference Guide (updated) may be ordered using LN 4E78-03.</div><div>⁴ Extra copies of the Alcyon Literature Upgrade Kit can ONLY be ordered through the Order Entry system, not Field Service Logistics.</div></div>		

Replaced Disks:
Any old versions of software disks (Ver. 1.0, 1.4, or 1.5) shall be removed from the customer site after a successful upgrade.

Any old versions of software disks (Ver. 1.0, 1.4, or 1.5) in FSE Kits, Depots, and local, country, and Area warehouses shall be discarded.

Compatibility:
Alcyon Analyzers may be upgraded to Ver. 1.6 from these previous versions of software; Ver. 1.4 or 1.5.

In the event a Hard Disc Drive, 2-85279-01, is replaced, it will be necessary to have the Ver. 1.6 software disks available to load the software on the new drive. The software may be ordered using the List Number shown above (disks, letter, and instructions).

Section 4 - Detailed Description of Changes

This section of the ISA provides a detailed description of changes and enhancements being delivered in the Ver. 1.6 software upgrade.

Compliance

Y2K Compliance

Version 1.5	New Version 1.6
Required operator intervention to set date for year 2000.	No operator intervention required. Date is set automatically. NOTE: Version 1.6 software MUST be installed by December 31, 1999 in order for the ALCYON to be Y2K compliant!

Search, Sort, and Deletion by date range across centuries (i.e., 1999 - 2000)

Version 1.5	New Version 1.6
Search, sort, and deletion by date range across centuries does not work properly.	Software modified to resolve this issue. Enhances Y2K compliance.

Searching for Archived files by date

Current Version 1.5	New Version 1.6
Searching for Archived files by date does not function correctly. The year is stored as 2 digits (99) in the Archived files, but the search looks for 4 digits (1999).	The year is now stored with 4 digits in the Archive Files. Searching by date function corrected.

Operations

Patient results do not flag High/Low when out of range

Version 1.5	New Version 1.6
Patient results do not flag HIGH/LOW based on reference range.	Patient results will flag HIGH/OK/LOW based on the Reference Range. Flagging will occur on both the Incomplete (Invalid) and Complete report.

Appearance of Normal Range displayed on report

Version 1.5	New Version 1.6
The normal range currently displays as: NR: (5.00< x <10.00)	The normal range will now be displayed as: Ref Range (5.00 - 10.00)

Patient Report Enhancements

Version 1.5	New Version 1.6
Not enough room to print all last and first name characters on patient result report.	Software fixed to allow for entire first and last names to be printed on report. Doctor and Operator ID field moved to next line.

Original and Rerun result have different decimal points on the report

Version 1.5	New Version 1.6
When a rerun is ordered on a sample, both the original result and the rerun result are printed. Problem: If the first result has a decimal, it rounds up. Eg: Result = 3.7 reports as 4.0	Original result will print correctly with appropriate number of decimals.

(See example reports on following page)

Examples of Reports

SAMPLE ID : 123456789PATIENT ID: 987654321POSITION: 302/22/9913:30

NAME : Smith Sally

DOCTOR : John GreenOPERATOR ID: Jones Fred

COMPLETE RESULT

ALK : 207 U/L Ref Range (36 - 92) HIGH

T PROT : 8.2 U/L Ref Range (6.0 - 8.3) OK

CREAT : 0.45 U/L Ref Range (0.60 - 1.20) LOW

| | |

Result | |

Unit Normal Range Flag/Error

Abbott Laboratories

1921 Hurd Drive

Irving, TX 75308

NAME : Smith Sally

PATIENT ID : 987654321

SAMPLE ID : 123456789

DATE : 04/03/98 16:29

ALK : 207 U/L Ref Range (36 - 92) HIGH

T PROT : 8.2 U/L Ref Range (6.0 - 8.3) OK

CREAT : 0.45 U/L Ref Range (0.60 - 1.20) LOW

| | |

Result | |

Unit Normal Range Flags Only

.....

Corrupt Worklist

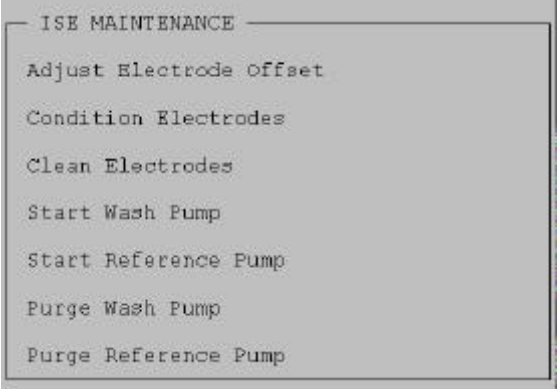
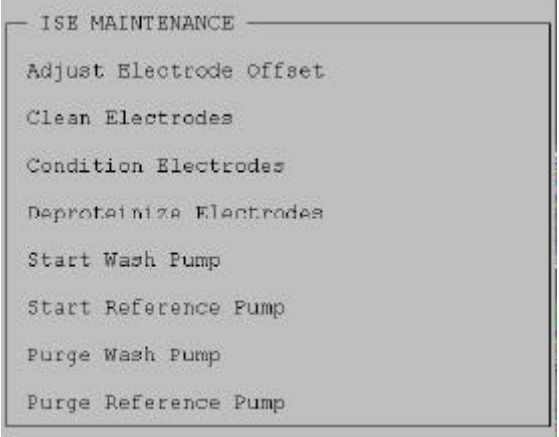
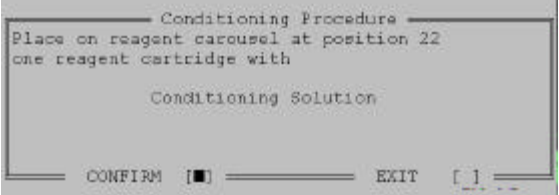
Version 1.5	New Version 1.6
No orders appear in the Worklist after being entered in the Patient Order Entry screen. A patient ID of 7 appears in the Worklist screen. The Shutdown screen appears when initializing the analyzer.	Software changes were made to prevent these scenarios from occurring.

Pressing <Enter> too quickly moves cursor to Ratio or Profile selection box

Version 1.5	New Version 1.6
Pressing <Enter> too quickly in the Patient Order Entry screen moved the cursor to the Ratio or Profile Selection box. <F10> was not available.	Software fixed so that pressing <Enter> too quickly will not move the cursor to the Ratio or Profile selection box. User must press <F4> or <F7> to access Profiles and Ratios.

ISE Changes

Screen Changes to accommodate updated ISE Maintenance procedures


Version 1.5	New Version 1.6
<p>Screens do not appropriately accommodate updated ISE Maintenance procedures.</p> <p>Old screen:</p> 	<p>Screen changes to accommodate changes to updated ISE Maintenance procedures.</p> <p>New Screen:</p>  <p>Each option uses a single large container.</p>  <p>Timing is increased from 10 to 20 seconds so only one cycle needs to be performed.</p>

Reference Solution diffuses back into Na+ electrode

Version 1.5	New Version 1.6
<p>Reference solution diffuses back into Na+ electrode between pump cycles when system is in standby.</p>	<p>Software changed pump cycle from approximately 3 ½ minutes to 1 minute interval.</p>

LIS Changes

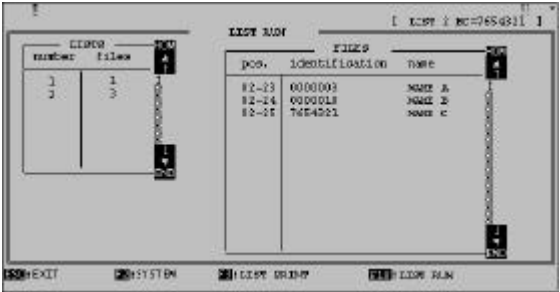
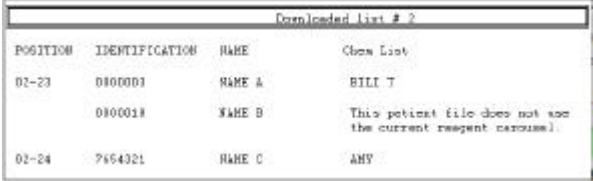
Capability of using leading zeros for all bar code symbologies

Version 1.5	New Version 1.6
Leading zeros are not allowed for bar codes/SIDs.	<p>Leading zeros will be allowed for all bar code symbologies/SIDs. Length is defined in Bar Codes Length field.</p>  <p>Must use a <u>fixed length</u> bar code as defined above. NOTE: Host must be configured for fixed length bar codes.</p>


SIDs do not increment correctly when using leading zeros in the Batch Mode

Version 1.5	New Version 1.6
SIDs did not increment correctly when using leading zeros in the Batch Mode. Zero was removed from all but the first SID.	<p>Able to use leading zeros in batch mode. Zeros are seen as significant characters and will not be removed in the Worklist.</p>

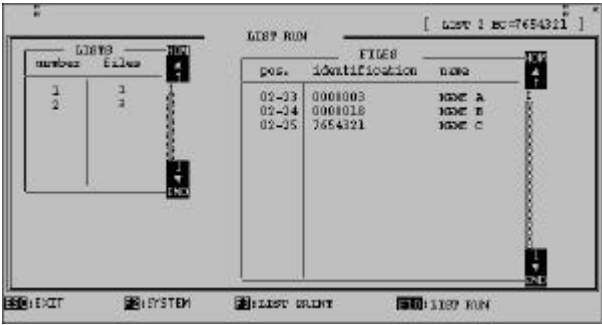
LIS Download/Current Carousel

Version 1.5	New Version 1.6
<p>The download list from the host is incorrectly filtered for multiple reagent carousels.</p>	<p>Samples which do not have tests on the current reagent carousel will not have positions assigned on the printed Download List.</p> <p>Example of screen: ALL downloaded samples will appear here. <u>Do NOT load samples from this screen!!</u></p> <p>Example of Printout: <u>Press <F3>: List Print and load samples using this printout!</u></p> <div></div> <div></div> <p>The following message will be displayed on the <u>printout only</u> for samples which are downloaded with no tests on the current reagent carousel:</p> <p>"This patient file does not use the current reagent carousel"</p>

LIS Mode Screen displays incomplete message at top of screen

Version 1.5	New Version 1.6
LIS Mode screen displays an incomplete message at the top of the screen. Example: "Sample position statu"	Entire message will be displayed. Example: "Sample position status" 

List Run screen enhancement

Version 1.5	New Version 1.6
List Run screen does not display the appropriate number of characters in the Name Field (i.e., 19 displayed; 20 expected).	Field length fixed to display 20 characters in Name Field. 

Tests requests linked to PID instead of SID when using bar-coded tubes

Version 1.5	New Version 1.6
When using the interface, the test results were uploaded to the host using the PID instead of the SID.	Software changed to ensure that SIDs are uploaded to the host with test results.

Control results flagged out of range when they are in range

Version 1.5	New Version 1.6
Control results flagged out of range when they are in range. Eg: Result = 4.0 Range = 4.0 - 8.0 Flagged COL	Software corrected rounding problem. Controls will not be flagged out of range if they are within range.

Blank Control reports with heading of CT0

Version 1.5	New Version 1.6
Blank Control reports with a heading of CT0 will print for every assay ordered on the control. Eg: 15 assays ordered = 15 blank control reports printed.	Software changes have been made to significantly reduce the probability of this occurrence.

Profiles and Ratios

Modifying Reagent Carousel would allow the wrong test to be run in profile

Version 1.5	New Version 1.6
If assays on a Reagent Carousel are modified and profiles containing those assays are ordered, the wrong test will be run.	Before allowing modification of a Reagent Carousel, a warning will be displayed. (See graphic below.)

ATTENTION

You are reassigning a reagent position currently used by :

TPROT

If you proceed, the reagent will be removed from the following profiles :

CIEM 7

CONFIRM []

EXIT [■]

Ratio and Profile Selection Boxes do not update correctly

Version 1.5	New Version 1.6
Ratio and Profile selection boxes do not update correctly when the Reagent Carousel is changed on the Patient Order Entry Screen.	Correct Profiles and Ratios are displayed if Reagent Carousel is changed in Patient Order Entry screen.

Modifying patient file with ratios previously ordered -- ratios no longer selected

Version 1.5	New Version 1.6
When modifying an existing patient file with ratios selected, the ratios are no longer selected.	Software fixed so that ratios remain selected and can be edited.

Results

Results with Analytical Flags

Version 1.5	New Version 1.6
Results with an analytical error of CAL were printed/displayed with a result of 0.0.	Results with an analytical error of CAL will print/display with blank spaces.

"All Tests Complete" Scrolling Message

Version 1.5	New Version 1.6
"All Tests Complete" message would scroll when the run was complete. Message would scroll regardless of System Setup.	"All Tests Complete" message will only scroll if the "Beep when all tests are finished" parameter in System Setup is set to "Y" for Yes. Message will NOT scroll if the parameter is set to "N" for No.

Other Issues

Screen Saver

Version 1.5	New Version 1.6
Screen saver removed.	Screen saver still inactive.

Unable to run urine dilutions on Controls

Version 1.5	New Version 1.6
Unable to run urine dilutions on controls.	Separate assay files must be created for each urine assay in order for correct Reference Range and flags to be displayed and printed. Dilution is designated as Systematic dilution with same value in slope -- this will allow controls to be diluted. Urine field in Patient Order Entry screen must be set to "N" (No). No software modifications were necessary.

Foreign Language Issues

Version 1.5	New Version 1.6
Various foreign language issues.	There have been no changes regarding foreign language issues. Language issues will be addressed with specific Ver. 1.6 language disks to be released in the near future.

Section 5 - Software Installation and Verification

Installation

Perform the upgrade using the Installation Instructions included in the Alcyon System Software Ver. 1.6 Upgrade Kit.

Verification

- Verify the Assay Configurations are correct. (Refer to Alcyon Reagent Application Manual.)
- From the Main Menu, select:
 <Methods>, <Configuration>, then <Assay/Diluent Config>.
 - Enter the Level 1 password (Found in Appendix E of the Operations Manual). Verify the Assay Configurations are correct (refer to Alcyon Reagent Application Manual).
 - If the Assay Configurations are not correct, restore the information from Methods Disk as described below.

To verify this....	From the Main Menu, select:
Methods (Includes Assays, ISEs, Ratios, Diluents, Dilution/Rerun, and Reflex Option)	<Configuration> <Assay/Diluent Config> Enter Level 1 Password (see Appendix E of Operations Manual).
Reagent Trays Configuration	<Reagent Carousel> <New / Edit> Verify that the Reagent trays are correct.
Profiles	<F3> Verify that the profiles are correct.
Calibrators	<Calibration> <Configuration> Press <Enter> 6 times. The cursor will be at Cal Name # 1. Press <F8> Verify that the calibrator names are correct.
Controls Definition and Validation Rules	<Controls> <Configuration> Verify that the control names and lot #s are correct. For each Control press <F9> and verify that the control values are correct.



ABBOTT
ADD

INSTRUMENT SERVICE ADVISORY

SUBJECT: Ver 1.5 Software Issue in LIS Download and List/Run Modes	ISA#: 120-012
ORIGINATOR: Gary Tompkins	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Christie McCain 08-FEB-1999	EFFECTIVITY DATE: 08-FEB-1999

ALCYON (TM) is a trademark of Abbott Laboratories.

An issue has been identified with Alcyon System Software Ver 1.5 in the LIS Download and List/Run Mode. This issue may allow for samples pipetted from one patient to be reported as the results of a different patient, i.e., mismatching the results. The potential for this mismatch occurs ONLY when the ALCYON is used in the LIS Download and List/Run Mode. This problem will be resolved in the next release of system software, currently scheduled for Q2 this year. See below for the workaround options for this issue.

Products Affected:

- ALCYON 300i (110V) AnalyzerLN 04D68-02
- ALCYON 300i (220V) AnalyzerLN 04D69-02
- ALCYON Software Version 1.5LN 04E73-03

Issue:

A patient sample may be pipetted from one sample tube and be reported as the results of a different patient. The potential for this to occur exists only under following combination of conditions:

1. The LIS Download and List/Run Mode is selected to download the work list from the laboratory computer to the ALCYON Analyzer.
- AND
2. The ALCYON Analyzer is configured to use two or more Reagent Carousels.
- AND
3. No Chemistry test is ordered for a patient sample on the current carousel.

NOTE: If the customer is not currently operating under these conditions, the patient results are not impacted.

Necessary Actions To Be Taken:

1. Do not use the LIS Download and List/ Run Mode.

2. If the Alcyon software is configured as noted above: Presently, the only workaround is to reconfigure the Alcyon to use one of the two modes listed below. It may be necessary to contact the customer's LIS vendor to determine which of the options listed below are compatible with their LIS. Specific changes to ALCYON parameters will need to be determined by the LIS vendor.

LIS Mode (Query mode)- In this mode, the Sample ID is either manually entered on the Analyzer (for non-bar coded tubes or cups) or is read from the bar code label on the tube. Using the Sample ID, the Analyzer then queries the laboratory computer for the tests to be run. The laboratory computer downloads the tests; the Analyzer runs the tests, then the results are uploaded to the laboratory computer.

The instructions for using the LIS Mode can be found in the ALCYON Operations Manual, Section 5, *Operating Instructions: Running Tests Downloaded from a Laboratory Computer* in the section titled LIS Mode.

Unidirectional Mode - When using the Unidirectional Mode, the Sample IDs and tests are manually entered on both the ALCYON Analyzer and the laboratory computer. The Analyzer runs the tests, then uploads the results upon completion. The instructions for using the Unidirectional Mode can be found in the ALCYON Operations Manual, Section 5, *Operating Instructions: Ordering and Running Tests* in the section titled Entering Tests Manually (Routine and STAT).

If you have any questions regarding this Instrument Service Advisory please contact your Area Specialist or WWCS CSE.

END OF DOCUMENT



ABBOTT
ADD

INSTRUMENT SERVICE ADVISORY

SUBJECT: ALCYON (TM) Product Changes and New ISE Maintenance Procedures	ISA#: 120-011
ORIGINATOR: Gary Tompkins	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Kathy Jennings 3/12/1999	EFFECTIVITY DATE: 12-MAR-1999

ALCYON (TM) is a trademark of Abbott Laboratories.
Teflon is a registered trademark of E.I. duPont de Nemours and Company

The purpose of this ISA is to inform the Field of the following:

1) Several improvements to the Alcyon Analyzer are being incorporated into new instruments. These changes will be incorporated on different serial numbers and on different dates.

The improvements are as follows:

- New Reaction Carousel Sensor Adjustment Mechanism
- Improved Sample Probe Clamp
- New Cast Cuvette Loader Assembly
- Changes to LLS/Command PCB (Board 1)
- New Keyed Sample Carousel Assembly

2) New ISE Maintenance Procedures have been established. The new procedures are summarized in a table in the section below, titled New ISE Maintenance Procedures. Detailed information can be found in OPs Manual Update - LN 07F68-01.

New Reaction Carousel Sensor Adjustment Mechanism

This new feature is being implemented on Alcyon Analyzers, beginning with S/N 1642, and allows for a more precise and efficient adjustment of the Reaction Carousel home position. This has been done by incorporating a screw adjustment mechanism. (See Figures below.)

The new mechanism is NOT downward compatible. It cannot be installed on analyzers below S/N 1642 because the intermediate plate has been redesigned on newer instruments to accommodate this new mechanism and other future improvements.

Please note that the Reaction Carousel Home Sensor catalog number, 2-85267-01, has not changed, only the mounting scheme. The sensor remains compatible with all instruments.

Adjusting the Reaction Carousel Position

Refer to VP-39 in the Alcyon Service Manual.

If the Carousel position needs to be adjusted:

a) loosen the Locking Screw (see Figures below).

b) turn the Adjustment Screw clockwise (see Figure 1) to adjust the Carousel in a clockwise direction OR turn the Adjustment Screw counter-clockwise (see Figure 2) to adjust the Carousel in a counter-clockwise direction.

NOTE: One full turn of the Adjustment Screw will result in a change of approximately 0.5mm in Carousel positioning.

c) After each adjustment, initialize the Carousel and visually re-check the alignment.

d) Repeat the adjustment as necessary. Always be sure to initialize the Carousel before verifying the position.

e) When properly aligned, tighten the Locking Screw.

f) **REMINDER: If the Reaction Carousel is adjusted, the Cuvette Loader and ALL robotics must be checked for proper alignment and realigned if necessary.**

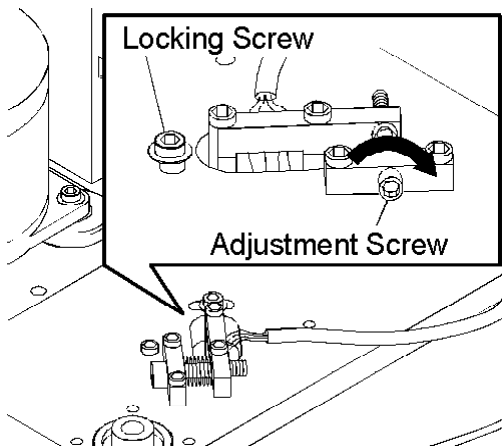


Figure 1

To adjust the Carousel clockwise

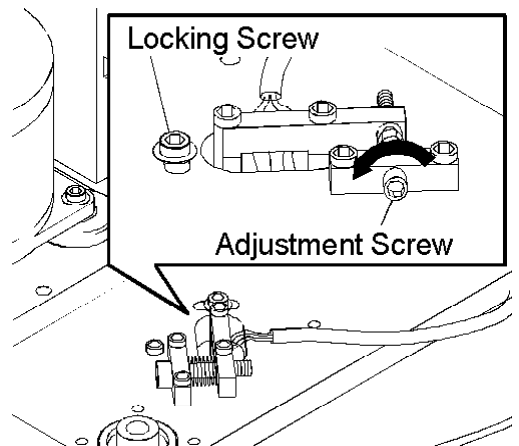


Figure 2

To adjust the Carousel counter-clockwise

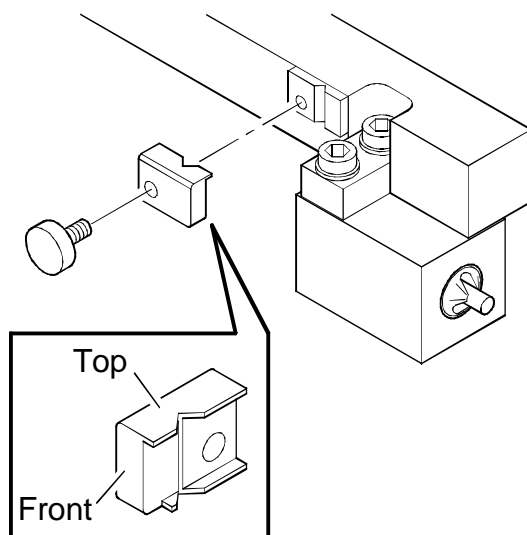
Improved Sample Probe Clamp

A new Sample Probe Clamp is being implemented. The new clamp improves the clamping of the Sample Probe which provides for a more consistent mixing action, especially when the probe is removed and reinstalled or replaced.

The new Sample Probe Clamp is downward compatible. The catalog number will remain the same at 2-82810-01. Any new orders for this part will be filled with the new Probe Clamp.

Note the differences between the old and new clamps. As shown below, the new clamp has a V-shaped notch in the top and bottom of the clamp. The older clamp had a square notch and only at the top.

NOTE: After changing the Sample Probe Clamp, verify all aspects of the mixing function and make adjustments to the Mixer and Sample Arm as necessary.



New Cast Cuvette Loader Assembly

A new cast aluminum Cuvette Loader Assembly has been incorporated beginning with S/N 1696.

Since it is downward compatible, the catalog number for the Cuvette Loader Assembly will remain the same at 2-82655-01. Any new orders for this part will be filled with the new style Loader.

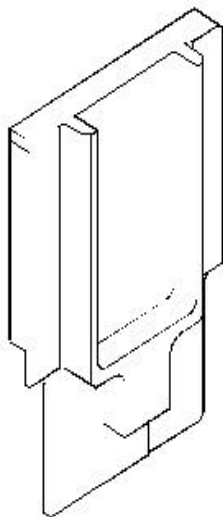
Changes to the assembly include the following:

- Cast aluminum frame - eliminates need to adjust rails
- New unload hook assembly - more reliable
- Knurled knob at motor for manually raising and lowering cuvettes when motor is disengaged
- New motor and motor is relocated lower on assembly
- Power resistor added to accommodate new motor

NOTE: When installing a new Loader, do not force the use of the old Cuvette Loader Alignment Tool if it does not fit the rails. Damage to the Loader rails may occur. Some of the old tools in stock, were found to be out of tolerance with respect to the 34mm rail adjustment specification. A new tool has been released. See the next item in this ISA.

New Cuvette Loader Alignment Tool

A new, improved Cuvette Loader Alignment Tool has been released. The tool is taller than the original to provide better rail engagement during the alignment procedure. Additionally, some of the original tools in stock were found to be out of specification for the 34mm rail spacing. The catalog number has changed to 2-83440-02 (was 2-83440-01).



Cuvette Loader Alignment Tool - 2-83440-02

Changes to LLS/Command PCB (Board 1)

A few changes have been made to the LLS/Command PCB.

- The values of resistors R35 and R43 have changed to compensate for differences in pre-heater capacitance values. Some instruments may exhibit LLS issues due to interference between the pre-heater and fluid sense circuits. This change eliminates the interference problems.
- A change to the value of R83 which increases the gain for the cuvette sensors, to eliminate false sensor readings.
- As a cost reduction, several unused components are being removed from newly manufactured boards.

Existing stock of the LLS/Command PCB will be reworked with the exception of the removal of the unused components. Reworked PCBs can be identified by the following part number found on the board, 85020-**105**.

The catalog number for the LLS/Command PCB will remain the same at 2-85020-01. Any new orders for this part will be filled with the new version PCB.

New Keyed Sample Carousel Assembly

The Sample Carousel assembly is now 'keyed'. This includes, as a set, the Lower Carousel Tube Support and the Carousel Tube Holder (number ring).

- Originally, the six carousel support posts were symmetrically spaced. Therefore, the number ring could be installed in six possible positions, only one of which is correct.
- For the new assembly, one of the carousel support posts and corresponding hole in the Tube Holder (number ring) are offset. This offset position will assure that the Tube Holder is installed properly. That is, when the carousel is initialized, sample position 38 should be aligned with the sample probe.
- Due to the new design, the catalog numbers for both the upper and lower parts of the Sample Carousel assembly have changed as noted in the table below.

NOTE: If an 'old style' (original) Tube Holder is to be replaced, it will also be necessary to order and replace the Lower Carousel Tube Support so the new offset hole patterns for each part will match.

Part	Old Catalog Number	New Catalog Number
Carousel Tube Holder (Number Ring)	2-83161-01	2-83161-02
Lower Carousel Tube Support	2-83162-01	2-83162-02
		Must be used together

(continued)

New ISE Maintenance Procedures

New ISE maintenance procedures have been released which will favorably influence the stability of the ISE readings and results. Customers have been notified of these changes via a customer letter and the Operations Manual Update noted above.

Summary of changes:

These procedures replace the original ISE Maintenance Procedures.

	Procedure	Purpose
1	Use Start Wash and Reference Pumps for 1 minute each BEFORE cycling power to the Analyzer or turning the Lamp ON.	This procedure will ensure that there is no fluid in the electrode sample path before the system is initialized.

2	<p>At the beginning of the day, perform two cycles of the <i>Clean Electrodes</i> selection in the ISE Maintenance screen using the ISE Sodium Conditioning Solution.</p> <p>At the end of the day, perform two cycles of the <i>Clean Electrodes</i> selection in the ISE Maintenance screen using the ISE Deproteinizer Solution.</p>	<p>This procedure will allow the solution to remain in the electrode sample port for an extended time which will improve the performance of the electrodes.</p>
3	<p>Clean the Reference Electrode Housing with bleach two times per month.</p>	<p>This new procedure will help remove protein deposits from the Reference Electrode Housing capillary and improve the performance of the electrodes.</p>
4	<p>Check the Sample and Reagent Syringes Daily and Monthly for:</p> <ul style="list-style-type: none">BubblesParticulate matterDiscoloration of the syringe barrelDiscoloration of the Teflon® tip of the pistonLeaking	<p>This revised procedure will help determine when a syringe needs to be replaced.</p>

END OF DOCUMENT



ABBOTT
ADD

INSTRUMENT SERVICE ADVISORY

SUBJECT: Alcyon Passwords	ISA#: 120-010
ORIGINATOR: Emile Diou	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Christie McCain 2/12/1999	EFFECTIVITY DATE: 12-FEB-1999

ALCYON (TM) is a trademark of Abbott Laboratories.

The purpose of this ISA is to inform the field of the passwords for the years 1999 and 2000. The Alcyon instrument has 3 different passwords but only the level 1 and level 2 password should be used. The following describes when each password should be used.

The level 1 password is required:

- to access the "Development Menu"
- to change the assay configuration parameters
- to set up customer defined assay configuration parameters.

The level 2 password is required:

- to change the ratios on the instrument.
- to change a parameter in the development menu. This should NOT be used in the field. It has only been used by the Alcyon software development group.

The level 3 password is not required for Abbott distributed instruments:

- This password is used only for a special software distributed only to Menarini and Bayer customer.

The passwords for 1999 and 2000 are as follows:

1999

Month	Level 1	Level 2
January	GPRTE	ENQSE
February	ENRTE	BMQSE
March	BMQTF	YLPSE
April	YLQTG	WKPSF
May	WKQUH	TJPTH
June	TJQVJ	RIPUJ
July	RJQWM	PHPVL
August	PIQXO	MHQXO
September	MHRZR	KGQYR
October	KHSBV	IGRAU
November	IGSDZ	GFSCY
December	GGTFD	EFTFC

2000

Month	Level 1	Level 2
January	AABBC	AAABC
February	ABDGI	ABDFI
March	BDHMS	ADHLR
April	BGMVE	BFLTC
May	CISES	CIRCP
June	DLYOH	CKWMD
July	EOFZX	DNDWT
August	ESMLP	EQJHK
September	FVTXH	FUQTB
October	GYAKA	GXXFU
November	HCIXU	HAESN
December	IFPKO	HEMEG



ABBOTT
ADD

INSTRUMENT SERVICE ADVISORY

SUBJECT: Alcyon (TM) CD-ROM Service Manual	ISA#: 120-008
ORIGINATOR: Mark Holohan	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Kathy Jennings 3/12/1999	EFFECTIVITY DATE: 15-MAR-1999

ALCYON (TM) is a trademark of Abbott Laboratories.

I. Distribution:

Worldwide

II. Purpose:

The purpose of this ISA is to inform the field of the release of the Alcyon CD-ROM Service Manual.

Note: See corrections to the Alcyon Service Manual in this ISA following the installation procedures. These corrections will be incorporated in the next revision of the Service Manual.

III. Parts:

Alcyon Service Manual CD-ROM P/N 2-83276-01

IV. Procedure:

Use the following steps to load the CD-ROM:

1. Insert CD-ROM into CD drive.
2. Select CD-ROM drive (D:) under "My Computer".
3. Double click on the "Front".pdf file.
4. Allow CD-ROM to load then click "M" for the Master Table of Contents or the chapter number desired.
5. Within chapter, click on the chapter number in the lower left of screen to return to that chapter's Table of Contents. Return to the Master Table of Contents by clicking on the Alcyon word in the upper left of page. In both cases, the pointing finger must be showing for these functions to work.
6. Return to selection of chapters by clicking the I< menu button in the Master Table of Contents screen.

Note: To add shortcut for the Alcyon CD-ROM Service Manual front page:

1. Double click "My Computer" on desktop
2. Select CD-ROM drive (D:) under "My Computer".
3. Click on "Front".pdf file. Click "File" and then "Create Shortcut". Select "yes" when asked "Do you want the shortcut placed on your desktop?"
4. Move mouse over "Shortcut to Front" icon on desktop and right click.

ALCYON (TM) is a trademark of Abbott Laboratories.

5. Select Properties and click the Shortcut tab.
6. Select "Change Icon" option
7. Select "Browse" and click on arrow for dropdown box at the top of the "Change Icon" window.
8. Click on CD-ROM drive (D:) and double-click on the "Alcyonsm" file.
9. Select OK and then select "Apply".

Note: To rename icon:

1. Move mouse to "Shortcut to Front" icon and right click.
2. Select "Rename", enter desired name (i.e. Alcyon Service Manual) and hit the enter key.

Make note of the following corrections:

1. Pg. 2-110, Change "Replace PCB #5" with "Replace PCB #6" (two places).
2. Pg. 3-26, Item #7 should be L/N 05D15 Reference Electrode Housing. Item #8 should be L/N 05D14 Reference Electrode. (L/N 05D25 is the Dummy Electrode).
3. Pg. 4-133, Incorrect figure for Reagent Carousel Belt, use figure 4-70 on Pg. 4-139.
4. Pg. 4-139, Incorrect figure for Sample Carousel Belt, use figure 4-67 on Pg. 4-133.
5. Pg. 4-225, Incorrect figure for ISE Controller BD., refer to figure #2 following this section.
6. Pg. 4-230 Replace existing text under verification step 1a, with 1) Initialize Sample Transfer Arm, 2) Initialize Sample Syringe and remove text in line #3.
7. Pg. 5-101, For VP-44, refer to ISA 120-001.
8. Pg. 5-105, Incorrect figure for the Load/Unload alignments, refer to figure #1 following this section.
9. Pg. 3-40, Incorrect figure inset, refer to figure #3 following this section.

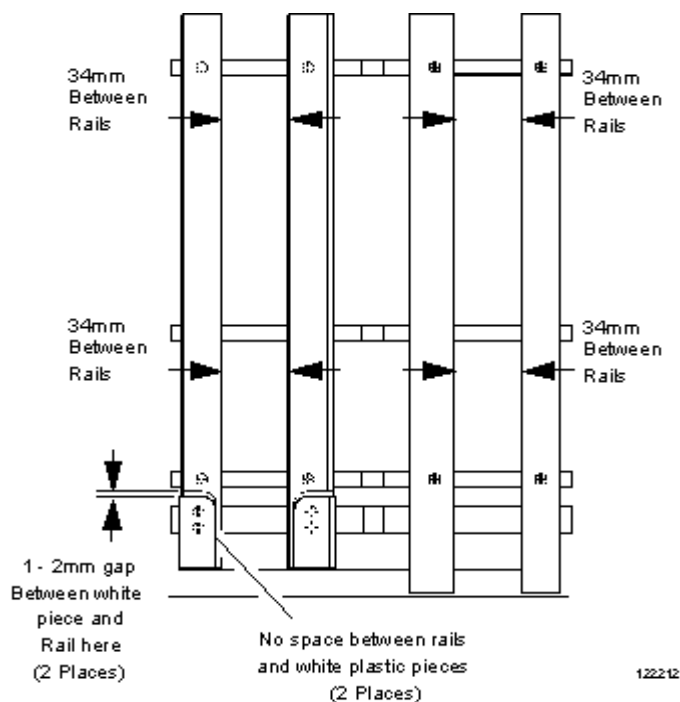


Figure 1

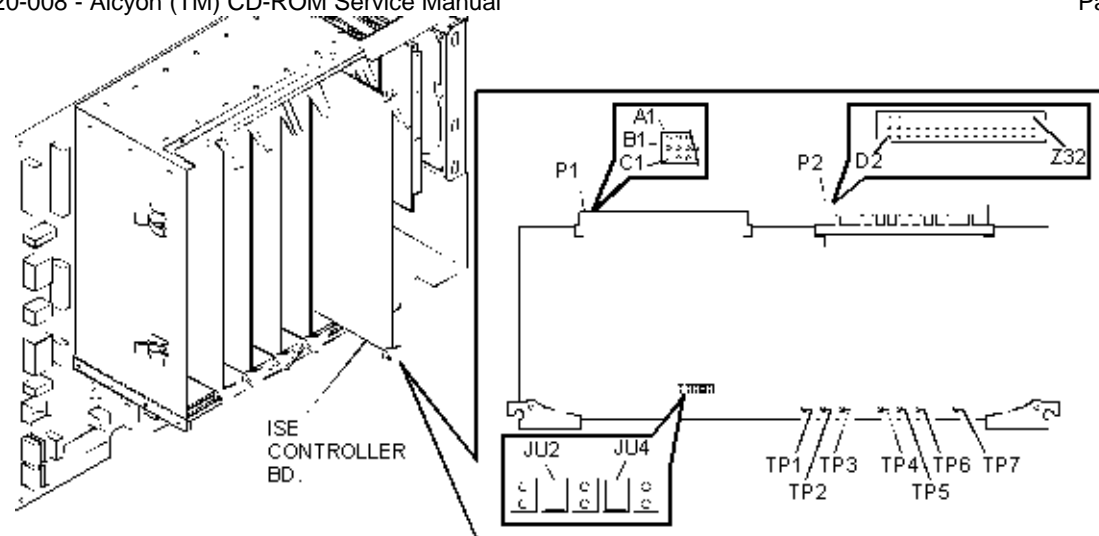


Figure 2

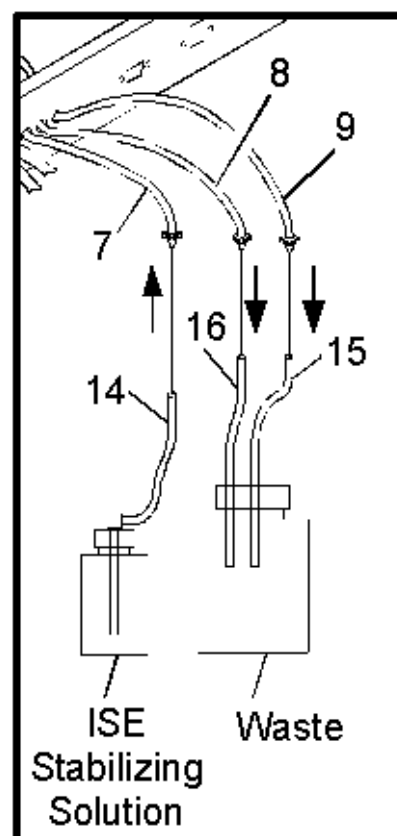


Figure 3



ABBOTT
ADD

INSTRUMENT SERVICE ADVISORY

SUBJECT: Transfer Arms Troubleshooting	ISA#: 120-007
ORIGINATOR: Emile A. Diou	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Lynn Fine 12/11/98	EFFECTIVITY DATE: 10-DEC-98

ALCYON (TM) is a trademark of Abbott Laboratories.

- I. DISTRIBUTION:
Worldwide
- II. PURPOSE:
The purpose of this ISA is to inform the field of additional alignments for the transfer arms. Incorrect alignments of the arms may cause Error Code #3 - Sample Arm High Position Not Detected or Error Code #4 - Reagent Arm High Position Not Detected.
- III. PARTS:
None
- IV. PROCEDURE:
The following tables identify probable cause for errors experienced due to mechanical mis-alignments or electrical failures.

It is necessary to use Diagnostic Software when evaluating and correcting the problems listed below. Perform VP-33 to access the Diagnostic Software.

Note: The following tables can be used for both transfer arm assemblies. The Sample Transfer arm is used for example purposes only.

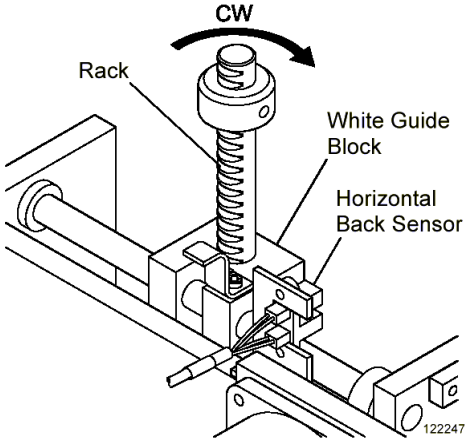
Mechanical Alignment	Resolution
1. Instruments shipped prior to 10/14 were shipped with the arms in the down and back position. If the arms are not positioned in the wash well before power up, the arm will hit the indexer during initialization.	1. Manually position the arm in the wash well prior to initialization.
2. The horizontal (back) home sensor is misaligned with the indexer. This will cause the arm to hit or rub the indexer.	1. Align the horizontal (back) home sensor so the probe is properly positioned in the cuvette. Then adjust the indexer. See Transfer Arm Indexer Alignment procedure at the end of this document.

3. Excessive backlash between the vertical rack and pinion. This excessive backlash is caused by a misalignment between the vertical rack and the pinion.

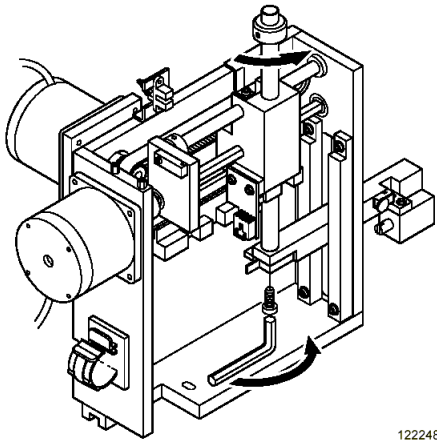
The excessive backlash can be identified by applying holding current to the arm motors, then manually raising the rack up and down.

- If the rack and pinion are not aligned properly, the rack will move slightly up and down.
- If the rack and pinion are properly aligned, the rack should feel stiff and should not have any movement up and down.

1. Align the vertical rack to the pinion (not seen), by rotating the vertical rack clockwise (counter clockwise for the reagent arm) until rack gear teeth are parallel or slightly off parallel to white guide block. Verify proper alignment by moving the arm up/down when holding current is applied to the motor. If the rack and pinion are properly aligned, the rack should feel stiff and should not have any movement up and down. It is normal to have a slight vertical movement at the end of the horizontal arm when it is properly adjusted.

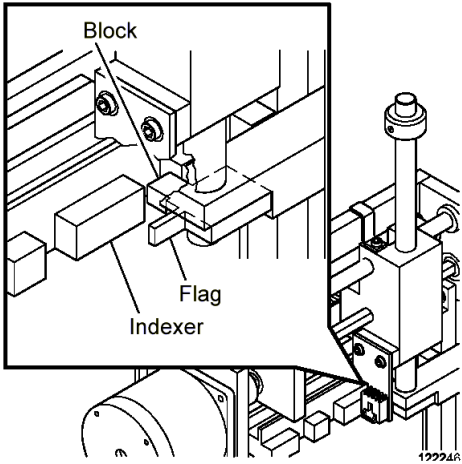


As a result of probe crashes, the hex screw at the bottom of the vertical rack can become loose causing excessive vertical movement of the horizontal arm. When tightening this screw, the vertical rack will rotate counter clockwise. The screw should be tightened until the rack gear teeth are parallel or slightly off parallel to white guide block. Verify proper alignment as described above.



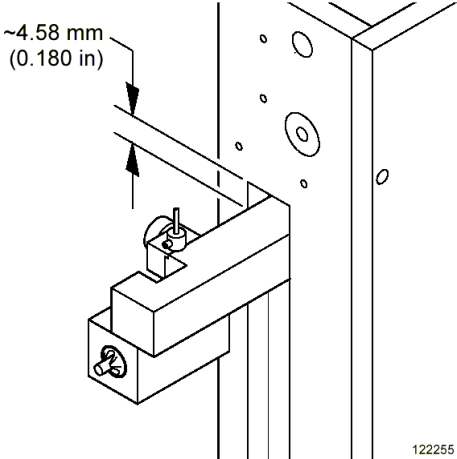
4. Loose screws on the indexer or mis-aligned indexer.

1. Realign the indexer so the block is centered within the indexer. See Transfer Arm Indexer Alignment procedure at the end of this procedure. The indexer is aligned specifically for each instrument. The arm should not rub or contact the indexer during normal operation. A replacement transfer arm will always require the indexer to be aligned for proper position.

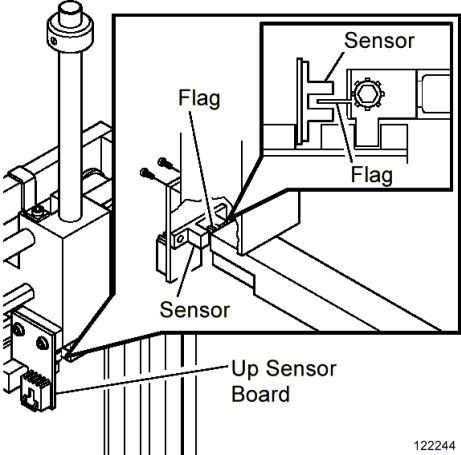


5. The screws that secure the up sensor pcb may be loose causing the flag not to go through this sensor or the flag may be misaligned causing the flag to hit the up sensor.

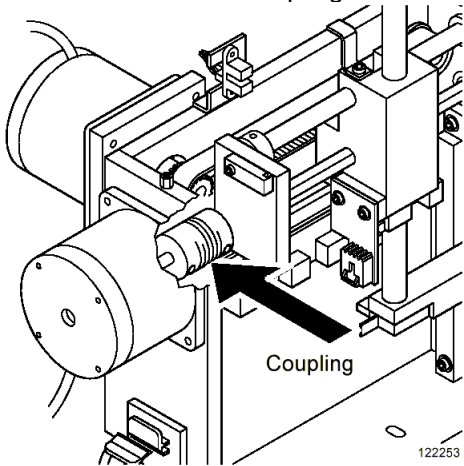
1. Disengage the holding current to the motor and manually raise the vertical rack shaft until the distance of the horizontal arm is approximately 4.58mm (0.180 in) below the opening.



2. Align this sensor pcb and/or the flag so it will go through the middle of this sensor.



3. Tighten the sensor pcb when the "Arm in high position" is displayed.

6. If the screws on the coupling (from the vertical motor to the square shaft) are loose, the homing flag may not make it back to the sensor.	1. Tighten the screws on the coupling. 
7. The probe tubing may get caught on the standoff screws that are used to secure the reagent probe preheater pcb. These standoff screws protrude through the center panel and may interfere with the sample probe tubing.	1. Replace and/or re-route the probe tubing. 2. Add spacers or washers under the standoff screws that hold the reagent probe preheater pcb.
8. An improperly adjusted ISE arm may impede the up/down movement of the sample arm. The ISE arm should move freely up/down, and should fit easily on the horizontal arm.	1. Re-align the ISE arm per VPi-08 in the Alcyon Service manual.

Electrical Probable Causes

1. The up sensor pcb is defective.	1. Replace the up sensor pcb. Follow the steps defined in item #5 in the table above for proper alignment of this pcb.
2. Erratic movement of the arm may be caused by the Motor Controller pcb.	1. For erratic movement of the sample arm, replace pcb #4. 2. For erratic movement of the reagent arm, replace pcb #3.
3. Poor connections on the Transfer connection pcb or broken/damaged trace may cause intermittent sensor problems.	1. Reseat all connections on the Transfer connection pcb or replace the Transfer connection pcb.
4. The flex cable from the home sensor may be damaged or have a poor connection onto the Transfer connection pcb.	1. Reconnect or replace the flex cable from the sensor pcb.
5. A poor cable connection (i.e. pushed pins or broken wires)	1. Reseat and/or replace the cable from the transfer arm to the cardcage backplane.
6. Erratic movement of the arm may be caused by a defective motor.	1. Replace the transfer arm vertical motor.
7. Erratic liquid level sensing can cause erratic movement of the transfer arm. - Observe the LLS display (signal) in diagnostic software for erratic sensing.	1. Troubleshoot level sensing problem.

Transfer Arm Indexer Alignment Procedure

NOTE: The following procedure can be used for both transfer arm assemblies. The Sample Transfer arm is used in this procedure for example purposes only.

- 1. Perform VP-33 to access the diagnostic software.
- 2. Initialize the transfer arm.
 - C - Sample Transfer
 - B - Complete Initialization of Module

3. Move the probe to the cuvette position.
C - Preprogrammed Up and Down Movements
Above (A) Washing
Backward and Forward Motion (N) No
First Movement (U) Up
D - Move from Washing to Aspirating Sample
E - Move from Sample to Reaction
4. Disengage the holding current to the arm.
J - Transfer Module Disengaging
5. Manually lower to probe and verify the it is in the correct position in the cuvette.
6. Manually raise the vertical rack shaft until distance of the horizontal arm is approximately 19mm (0.75 in.) below the opening. See Figure A.

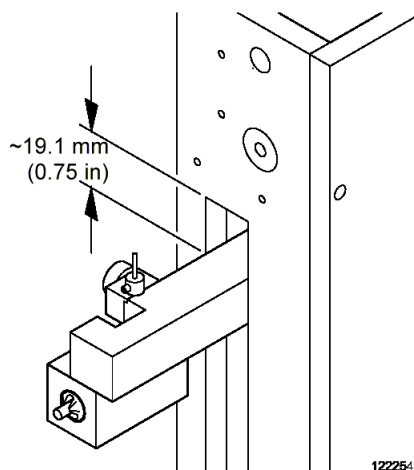


Figure A.

7. Manually move the white guide block backwards until it stops. This is the back opening of the indexer. Use a pencil to draw a line on the vertical wall to identify this position. See Figure B.

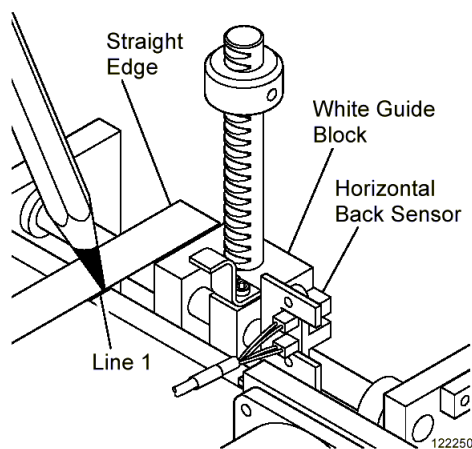


Figure B.

8. Manually move the white guide block forward until it stops. This is the front opening of the indexer. Use a pencil to draw a line to identify this position. See Figure C.

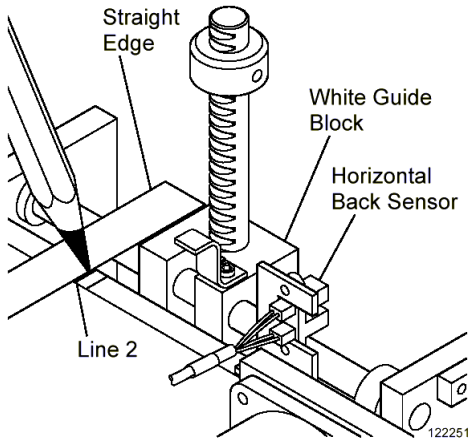


Figure C.

- 9. Repeat steps 2 - 5.
- 10. Draw a line to determine whether the block is centered in the indexer. See Figure D.

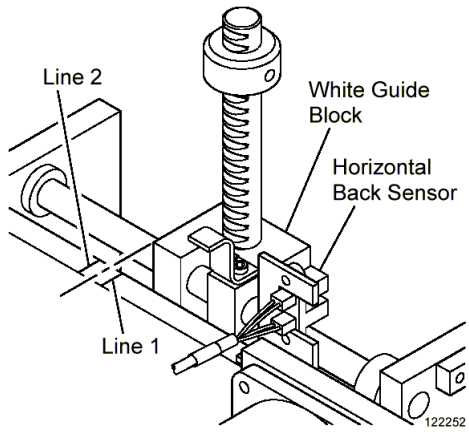


Figure D.

- 11. Adjust the indexer until block is centered. If may be necessary to erase the lines drawn and repeat steps 2 - 9 as needed to achieve this position.



ABBOTT
ADD

INSTRUMENT SERVICE ADVISORY

SUBJECT: CPU CMOS Configuration Settings	ISA#: 120-005
ORIGINATOR: Emile A. Diou	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Christie McCain 2/12/1999	EFFECTIVITY DATE: 12-FEB-1999

ALCYON (TM) is a trademark of Abbott Laboratories.

- I. Distribution:
Worldwide
- II. PURPOSE:
The purpose of this ISA is to inform the field of the procedure for setting up the CMOS configuration on the Alcyon CPU. There are two different types of CPU pcb's, a 100MHz and a 132MHz. The settings are the same for both.
- III. PARTS:
None.
- IV. PROCEDURE:
Perform this procedure when installing a new CPU board. Verify the settings anytime a CPU board is removed and reinstalled.
- NOTE: The CPU boards are shipped with the proper jumpers installed. **DO NOT** re-configure the jumpers on a replacement CPU board.

- VERIFY CPU CLOCK SPEED
1. To verify which CPU is installed, turn the instrument on and watch the display for a rectangular box titled;
"AMIBIOS System Configuration".

2. At the bottom of this box the CPU clock speed will be displayed, as either 100MHz or 132MHz.

DEFAULT SETTINGS

NOTE: CPU boards are shipped with defaults settings. Perform this procedure only to establish the default settings.

1. Turn the instrument ON.

2. When the line, "Hit DEL if you want to run SETUP" appears, press the red STOP key. BE PREPARED! This line comes up within seconds after turning the instrument on and is only visible for a couple of seconds. If the boot-up routine bypasses this point, turn power OFF and start again at Step 1.

3. At the AMIBIOS Setup screen, Tab to the "DEFAULTS" window, select "Optimal" and press<ENTER>.

- UTILITY SETTINGS
1. Use the Tab key to move to the "UTILITY" window, and select "IDE Setup".

2. The screen will display "Auto detection in process", then show the following parameters:

	Type	Cyl	HD	WP	Lz	Sec	Size (MB)	LBA	Block
Primary 1	User	4092	16	65535	4092	63	2014	Yes	16
2	not detected								
Secondary 1	not detected								
2	not detected								

These parameters may be different if the size of the hard drive changes in the future.

3. To "Accept Parameters?", select "YES"

SETUP SETTINGS (for both 100MHz & 132MHz)

Use the Tab key to move to the "Setup" window. Select "Standard".

1. Select "Date/Time" and enter the correct date and time, then press <Enter>.
2. Press "Esc" to return to the "Setup" window..
3. Use the arrow key to move and select "Advanced".
4. Scroll down to "System Boot Up Num Lock". Press <Enter> and select "On".
5. Press the "Esc" key to exit.

Use the arrow key to move to the "Peripheral" window.

1. Select "Serial Port 1", press <Enter> and select "Disabled". Serial Port 1 must be disabled for the touchscreen to properly work.
2. Select "Serial Port 2". press <Enter> and select "Disabled". Serial Port 2 is not used, but should be disabled to avoid any possible conflict.
3. Press the "Esc" key to exit.

To Save the settings:

1. Press the "Esc" key until the "Exit Setup" window is displayed.
2. Select "Save changes and exit", to exit AMIBIOS Setup. The system will automatically reboot.

VERIFICATION:

1. Ensure proper instrument initialization.
2. Ensure proper touch screen performance.
3. Verify the date and time in the main system software.
4. Perform a basic run. (VP-26)



ABBOTT
ADD

INSTRUMENT SERVICE ADVISORY

SUBJECT: Rinsing Water Container Prior to Use	ISA#: 120-003
ORIGINATOR: Gary Tompkins	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Christie McCain 9/21/98	EFFECTIVITY DATE: 21-SEP-98

ALCYON (TM) is a trademark of Abbott Laboratories

This ISA is to inform the Field that plastic particles (from the vendor's manufacturing process) have been found in new Water Containers, 05D26-01, and **MUST BE RINSED OUT PRIOR TO USE**. Failure to rinse the containers, will result in the particles being aspirated into the ALCYON dispense system, causing blocked valves and probes and possibly erroneous results.

- When a NEW Water Container is to be used, the container **MUST BE RINSED PRIOR TO USE**. This applies to replacement containers as well as instrument installations. During Installation of the ALCYON system, determine which container will be used for the DI water supply and rinse per the instructions below. If unsure, rinse both containers supplied with the system.
- To rinse, fill with 2 to 3 liters of water, cap the Container, block the vent hole in the top handle, invert several times and empty. Repeat until all particulate matter is removed.

END OF DOCUMENT

 ABBOTT ADD	INSTRUMENT SERVICE ADVISORY
--	------------------------------------

SUBJECT: Failure Analysis Parts Label	ISA#: 120-002
ORIGINATOR: Bob Schabel / Gary Tompkins	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Christie McCain 9/21/98	EFFECTIVITY DATE: 21-SEP-98

--

I. DISTRIBUTION:

Australia, USA, and the 13 European Union nations.

II. PURPOSE:

This ISA provides information about the new Failure Analysis Parts Label being introduced for use with the Alcyon instrument. It is intended to help improve the process of Failure Analysis (FA) for parts and assemblies on new products. Only Australia, USA, and the 13 European Union nations should participate in this program. All other countries should continue to route their returned parts through normal channels.

Figure 1 is an example of the tag that will be included with some Catalog parts that the Dallas Site Reliability department would like to get back for FA. The Field Service Representative will be responsible for determining if the part should be returned for FA using the procedure outlined below. The Failure Analysis Lab in Dallas is committed to investigate these parts and generate a report back to the Field.

The types of parts that should be returned are:

- DOA parts from installations.
- DOA parts from a normal service call.
- Repetitive replacements with similar symptoms indicating a failure trend with a part.

FAILURE ANALYSIS REQUIRED
<div>FAILURE ANALYSIS REQUIRED</div>
CENTER # / TICKET # : _____
PRODUCT CODE : _____ DATE : _____
INSTRUMENT S/N : _____
ORIGINATOR (PRINT): _____
(80521-101)

Figure 1

The tag is bright fluorescent orange in color and it has two sections:

- **The lower section, to be filled out by the FSR, should be attached to the failed part.**
- **The upper section is to be attached to the outside of the shipping container.**

Additionally, a clear, detailed description of the failure mode must be documented in the WWCMS ticket (Call Investigation Report).

Note: Not all failed parts are required to be returned for FA, only those which have failed for the situations noted in Step 1, below. When not needed, the label may be discarded.

III. PROCEDURE:

The FSR should:

1. Identify the failed part as requiring Failure Analysis.
 - DOA parts from installations.
 - DOA parts from a normal service call.
 - Repetitive replacements with similar symptoms indicating a failure trend with a part.
2. Document failure mode in WWCMS ticket.
3. Fully complete the Failure Analysis Label (Catalog Number 2-80521-01).
 - this label must include call center #, ticket #, Instrument Product code, Date, Instrument serial number, and FSR's printed name (needed if more follow-up is necessary).
4. Apply completed lower section of FA label to part.
5. Pack part(s) for shipment. These parts must be packed separately from the normal shipment of returned parts.
6. Apply upper section of FA label to outside of shipping package.
7. Ship part(s) directly to Dallas.

END OF DOCUMENT



**ABBOTT
ADD**

INSTRUMENT SERVICE ADVISORY

SUBJECT: Changes to Mixer Adjustment Procedure VP-44	ISA#: 120-001
ORIGINATOR: Gary Tompkins	PRODUCT: ALCYON (TM) 300i Rev 1 (120)
APPROVED: Christie McCain 9/21/98	EFFECTIVITY DATE: 21-SEP-98

ALCYON (TM) is a trademark of Abbott Laboratories

This ISA informs the Field of changes in the Mixer Adjustment Verification Procedure, VP-44 in the ALCYON Service Manual. The entire modified procedure is included below. Additionally, this ISA addresses other Mixer issues.

Summary of Changes to VP-44, Mixing Adjustment:

1. The target range for the Mixer frequency has changed to the same value used in the Factory:
FROM: 71.4 +/- 1.5 Hz TO: 70-75 Hz
2. If the Mixer frequency is adjusted, it must be STORED BEFORE the Mixer is STOPPED. If not, performed in this order, the new frequency value will be lost when the instrument is re-initialized.
3. The Mixer frequency can be measured at TP-5 on the Transfer Connection PCB, NOT at TP-1 as noted in Step 7 of VP-44 in the ALCYON Service Manual. The Transfer Connection PCB layout and test points changed for revenue units after the Service Manual was written. The figure in Step 7a below, depicts the layout of the new Transfer Connection PCB showing TP-5.

Modified Mixer Adjustment Procedure:

VP - 44 MIXING ADJUSTMENT (MODIFIED)

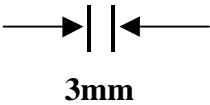
Perform this new procedure to check and adjust the mixing action of the Mixer.

Materials Required:

- White sheet of paper
- Frequency Counter

Setup:

1. On a white sheet of paper, make two marks 3mm apart.



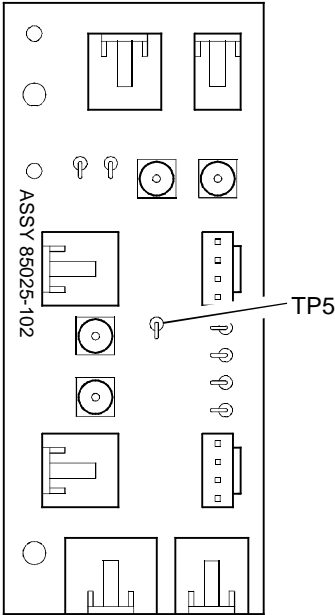
Layout of marks on paper.

2. Install a cuvette into each position on the Cuvette Carousel.

Verify Mixer Operation:

1. Access Reglages. (VP - 33)
2. Select the SAMPLE TRANSFER Menu:
C - SAMPLE TRANSFER
- a. Disengage the Sample Transfer Motors:
 J - TRANSFER MODULE DISENGAGING
3. Manually move the arm up and over the Sample Carousel. (Allows better view of mixing action)

- 4. From the SAMPLE TRANSFER Menu:
L - MIXING ADJUSTMENT
- 5. From the MIXING Menu:
A - RUN
- 6. The Sample probe should vibrate right to left.
 - a. If the Sample Probe does not vibrate, verify that it is installed properly.
- 7. Measure the frequency at TP - 5 (to chassis ground) on the Transfer Connection Board.
 - a. The target frequency is 70-75 Hz.

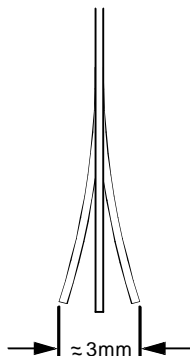


Top View of Transfer Connection PCB

122232

NOTE: A frequency of 70-75 Hz should yield the following visual verification of proper mixer adjustment.

8. Visually verify the proper operation of the mixer. Refer to the figure below.
 - a. The mixing action must meet two (2) requirements:
 - Visually it should appear as three (3) probes
 - The mixing action should be approximately 3mm
 - b. Use the piece of paper marked earlier to measure the 3mm action.



Mixer Adjustment:

1. From the MIXING ADJUSTMENT menu:
 - a. Select the frequency to adjust the mixing (vibration of the probe) to meet the requirements mentioned previously in the VP:
 - C - HIGHER FREQUENCY
 - D - LOWER FREQUENCY
 - b. When the adjustment is acceptable:
 - c. Save the new frequency value:
 - E - STORE FREQUENCY
 - d. Stop the Mixing:
 - B - STOP

Verify Mixing in Reaction Well and Wash Well (Automatic)

1. Access Reglages. (VP - 33)
 - a. From the Main Menu:
 - C - SAMPLE TRANSFER
 - B - COMPLETE INITIALISATION
 - L - MIXING ADJUSTMENT
 - F - VERIFICATIONThe Reagent and Sample Arms will be initialized and the Mixer will mix in the Wash Well then in several cuvettes.
 - b. Audibly verify the Probe does not hit the wall of the Wash Well or any part of the Cuvette.
 - c. If contact is made with the wall(s) of either item, adjustment may be necessary and may involve adjusting the Sample Transfer Assembly or Wash Well.
 - d. Select End:
 - E - END
 - e. Perform all or part of Sample Transfer Arm Alignment as necessary. (VP - 42)

END OF VP-44 (Modified)

Other items regarding the Mixer:**1. Securing the Sample Probe**

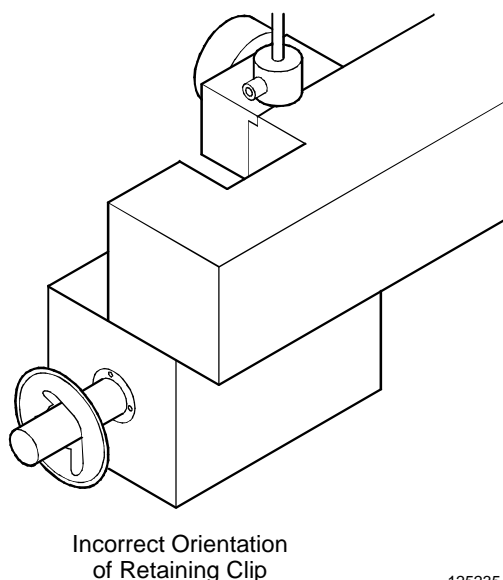
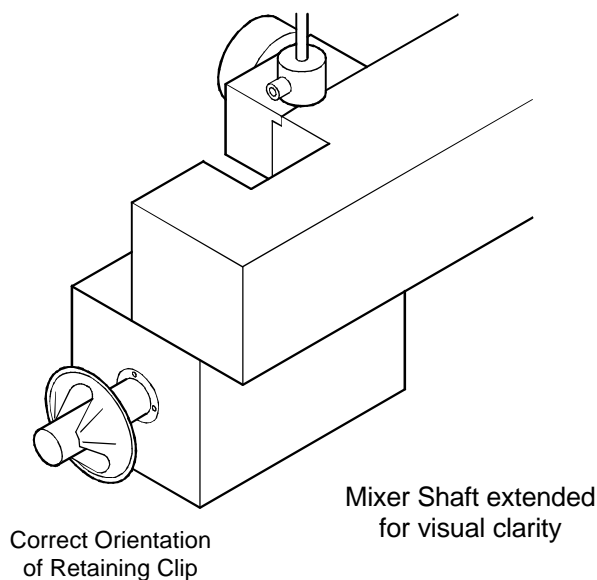
The Sample Probe must be properly secured by the Probe clamp and thumbscrew.

- a) If the Probe thumbscrew is too loose, the spring-loaded mixer shaft will push the probe out of position (not vertical) causing it to crash into the Wash Well and/or cuvette. As long as the Probe is properly secured by the thumbscrew, the Probe position should not be affected by the spring-loaded shaft.
- b) If the Probe thumbscrew is too tight, the mixing action may be inhibited. Do not overtighten the thumbscrew.

2. Retaining Clip

The primary purpose of the retaining clip on the Mixer shaft is to hold the shaft in place when Sample Probe is removed.

- a) The position and orientation of the clip are important to the Mixer operation. The clip should be positioned 3-4mm from the end of the shaft. If placed too far on the shaft, it will inhibit the operation of the Mixer.
- b) See the figure below for the correct *orientation* of the clip. If oriented incorrectly, the clip may, in time, slide out of position.



125235

3. Mixer Wiring

Verify that the two white Mixer wires do not hang down but are secured up inside the Sample Arm immediately after exiting the Mixer coil. If not positioned properly, the wires will interfere with the ISE Probe Retaining Bracket as it moves across the Sample Arm.

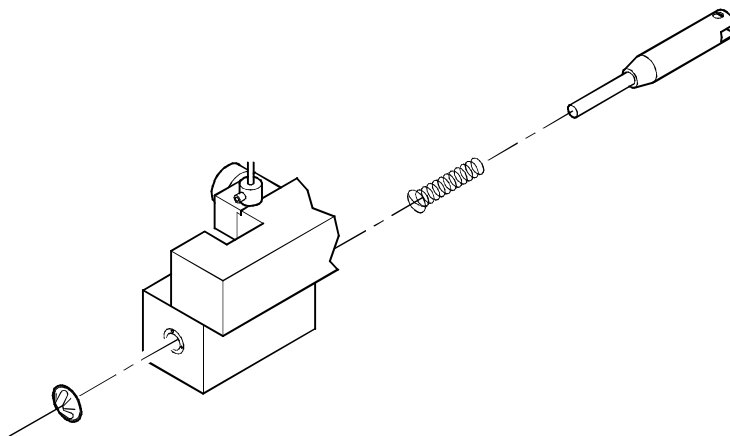
Troubleshooting the Mixer

If the Mixer does not work properly within the designated frequency range; that is, if it does not achieve the 3 probe look and 3mm swing as pictured above in VP-44 (Modified):

- a) Verify that the Probe is installed properly both at the clamp and through the hole in the Mixer shaft. Also, verify that the thumbscrew is properly tightened.
- b) It may be necessary to clean the Mixer shaft, spring, and coil cavity.

NOTE: DURING THE CLEANING PROCESS, BE CAREFUL TO NOT LOSE THE SHAFT, RETAINING CLIP OR SPRING. THESE ARE NOT CATALOGED PARTS. IF LOST, REPLACEMENT PARTS MUST BE TAKEN FROM ANOTHER MIXER ASSEMBLY.

- 1) Cover the Sample Carousel area with a clean towel.
- 2) Remove the Sample Probe.
- 3) Use needle-nose pliers or clamping hemostats to remove the retaining clip.
- 4) Take the shaft and spring out of the Mixer coil noting the orientation of the spring. The spring may remain lodged in the coil cavity. Being careful not to damage the spring, remove it using the Mixer shaft or a small hex wrench.
- 5) Clean the shaft, spring, and inside the coil cavity with a cotton swab dampened with alcohol.
- 6) Reinstall the spring, shaft, and retaining clip per the figure below. Refer to the figure in Step 2b to verify correct orientation of retaining clip.
- 7) Verify Mixer operation per VP-44 (Modified) above.



122241

END OF DOCUMENT