ABBOTT
ADD

INDEX
TECHNICAL SERVICE BULLETIN

PRODUCT:
AxSYM® (83)

DATE:
11-SEP-98

TSB #	IMPLEMENTATION	SUBJECT	EFFECTIVITY DATE
064	PENDING	AxSYM System Software ver. 3.05	PENDING
063	N S/N ≤13921	AxSYM Drain Manifold Upgrade	28-AUG-98
062	PENDING	Custom Tube	18-MAY-98
061	PENDING	Mod AxSYM to AxSYM2	PENDING
060	PENDING	Software version 3.03	PENDING
059	CANCELLED	New MEIA Optics Base	CANCELLED
058	N S/N See TSB	Ground Rework for Stepper Motors	03-APR-97
057	F S/N ≤8976	Software Version 3.01 Upgrade	07-JAN-97
056	F S/N See TSB	Custom Tube Segment Installation (MDS - Canada Only)	27-JAN-97
055	N S/N See TSB	Improper Output Power Setting on MEIA Optics	29-AUG-96
054	N S/N See TSB	Italian Software Version 3.00a Update	26-AUG-96
053	PENDING	Motor 20 Step Loss / RV Exit Block	PENDING
052B	N S/N < 6807	3.0 System Software	07-MAR-97
051	N S/N See TSB	MEIA Optics	13-NOV-95
050	N S/N 4840 & below	LLS Board	27-OCT-95
049	N S/N ≤ 4602	New and Improved V-Wheels For The Matrix Carousel	05-OCT-95
048A	N S/N ≥ 500 - 5074	Improved RV Exit Block (Superseded by TSB 83-053)	OBSOLETE
047	N S/N 3732 - 4148	270 Mb Hard Drive LED Failures	06-OCT-95
046	F S/N 4146 & below	New Process Carousel	11-SEP-95
045A	N S/N < 4185	Diluent Supply Tubing and Tubing Connectors	07-AUG-95
044	O N/A	2.10 Software	19-JUN-95
043A	O S/N See TSB	Software Version 2.33	26-FEB-96
042A	N S/N ≤ 3852	2.06 System Software	10-JUL-95
041B	N S/N 2716 - 2923	Upgrade for the Caged Syringes	30-MAY-95
040	N S/N 300 - 3478	Modified Air Deflector	08-MAY-95
039	F S/N ≤ 3852	Process Area Lid Fan Control	19-JUN-95
038A	O N/A	Software Version 2.00/2.05 Upgrade	10-MAR-95
037	N S/N 1871 - 2758	Feeder Shuttle	13-FEB-95
036	N 1503 - 2716	MEIA Lamp Thumbscrew Access	08-DEC-94
035	CANCELLED	NEVER RELEASED	CANCELLED
034	N S/N < 2417	Sample Barcode Reader [With Secured Internal Copper Shield]	30-NOV-94
033	CANCELLED	NEVER RELEASED	CANCELLED
032	O	Optional Sample Barcode Reader	08-MAY-95
031	N 301 - 2400	Improved Waste Connector	07-NOV-94
030A	N S/N ≤ 2408	New Matrix Cell Ejector Assembly	19-OCT-94
029	CANCELLED	NEVER RELEASED	CANCELLED
028	N SEE TSB	Software Version 1.33 (MDS - Canada Only)	07-OCT-94
027	N 301- - 2385	Power I/O Jumper Cut	21-SEP-94
026	N < 2377	New Matrix Cell Hopper	06-OCT-94
025A	O N/A	1.25 Software	19-OCT-94
024A	F ≤ 1900	OSP Digital Board ESD Improvement	25-JUL-94
023	N 301 - 1300	JIS Ferrite Core Kit	12-SEP-94
022	N 300-1612	Syringe Assembly Mount Adapter	06-JUN-94
021	N 300-1590	Drive Assembly Bracket	06-JUN-94
020A	I SEE TSB	Sampling Syringe Bracket	24-MAR-94
019A	N 300-1476	Scale Assembly	04-MAY-94
018	F 300-1330	MUP/QUAT/TAB WASH Pump Motor Cable	25-MAR-94

017	N	1017, 1020, 1046, 1050, 1091, 1103, 1121, 1135, 1144, 1158, 1173	Rear Cable Routing	27-APR-94
016	F	300-1200	Optic Regulator Board	21-MAR-94
015	F	301-1300	Double Insulated Power and Heater Cables	27-MAY-94
014A	I	300-1355	Installation of EPROMs on CPU Boards	31-MAR-94
013A	I	300-1355	Rev. B CPU Board	31-MAR-94
012	CANCELLED		NEVER RELEASED	CANCELLED
011	I	300-1251	Active Terminators	31-MAR-94
010B	I	300-1355	Version 1.20 Software	31-MAR-94
009	N	1000-1085	Screw above Transfer Mechanism hits mech. stop	12-JAN-94
008	I	1000-1099	RV Carousel Home Flag	04-JAN-94
007A	F	300-1086	Probe Holder with Captive Hardware	04-JAN-94
006	I	1000-1099	New Reagent Pack Actuator-37323-104	04-JAN-94
005	N	1000-1062	OSP Board With New Current Limiting Resistors	03-FEB-94
004	I	1000-1099	New Picker Arm for Transfer Mechanism-37040-103	04-JAN-94
003	CANCELLED		NEVER RELEASED	CANCELLED
002	O		Extended Waste Option	25-MAR-94
001	CANCELLED		NEVER RELEASED	CANCELLED

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

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
New Process Drain Manifold

TSB#: **83-063**

ORIGINATOR: **Michael A. Mowen**
APPROVED: **Jack Hall 9/4/98**

PRODUCT:
AxSYM® (83)

REF. ECN: **12857-005**

IMPLEMENTATION:	TSB Part/Kit #: **4-37237-02**	Upgrade Time: **1.0Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **28-AUG-98**	Validation Time: **0.5Hr.**
Instruments Requiring Modification: **S/N 13921 and Below**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.5Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
World-wide

II. PURPOSE:
To convert all AxSYM drain manifolds to the improved drain manifold.

III. ADMINISTRATIVE NOTES:
None

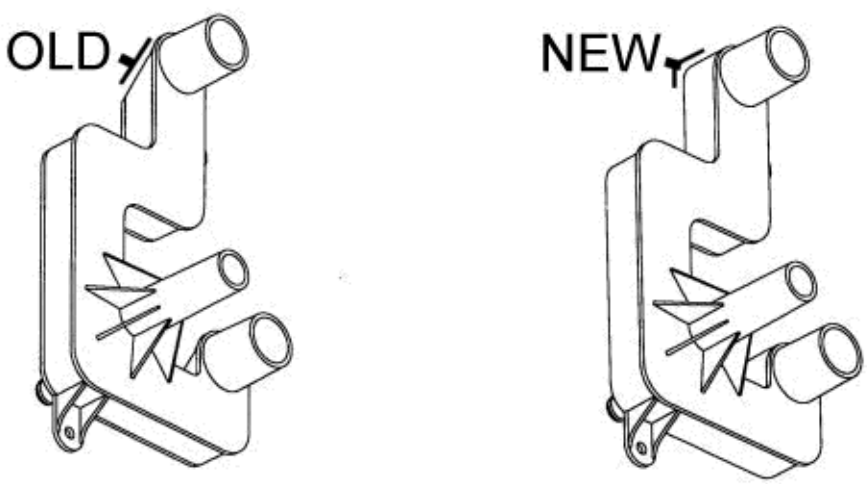
IV. SPECIAL TOOLS:
Standard Tool Kit

V. PARTS:
4-37237-02 Process Drain Manifold (NEW)

REPLACED PARTS:
4-37237-01 Process Drain Manifold (OLD)

COMPATIBILITY:
Compatible with all AxSYM systems.

VI. PROCEDURE:



The procedure is to replace the Old Drain Mainfold with the new Drain Manifold.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

The new manifold is made of a more chemically resistant material.

Since, this procedure involves the waste system, observe all bio-safety protocols.

For reference use service manual **PL-D2 Tubing-waste area** for part location.

MODIFICATION STEPS:

1. Shutdown instrument and power off unit.
2. Remove the six screws holding the rear access panel (panel below I/O panel).
3. Follow the service manual removal procedure RR-A3.4 Matrix Cell Crsl.
4. Remove the 2 screws holding the back half of the air deflector and set the deflector aside.
5. Remove the wash cup in the process area over the drain manifold
6. Remove the 2 screws holding the Drain manifold.
   - **Note:** If additional access to the screws are required, you may remove the process fix air director (Refer to PL-G and RR-G procedures in the service manual as needed)
7. From the rear access area, disconnect the drain line from the drain tube attached to the manifold. Then lift manifold up, remove tubing, rotate manifold 90° clockwise and remove manifold.
   - **CAUTION:** when removing drain line, fluid still in tube. Possible spillage can occur.
8. Clean area of all debris before going to next step.
9. Install the new Drain Manifold by performing the above steps in reverse order.

CHECKOUT:

Inspect position on install and verify tubing connection for leakage by performing several processing syringe flush cycles.

MODIFICATION CONTROL STICKER UPDATE:

Mark 63 on instrument TSB Label

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Ground Rework for Stepper Motors

TSB#: **83-058**

ORIGINATOR: **Rod Defibaugh**
APPROVED: **Mark Slater 4/3/97**

PRODUCT:
AxSYM® (83)

REF. ECN: **11672-002**

IMPLEMENTATION:	TSB Part/Kit #: **N/A**	Upgrade Time: **1.5 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **03-APR-97**	Validation Time: **1.0 Hr.**
Instruments Requiring Modification: **S/N 8745 to 9751 and Others in Administrative Notes**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **2.5 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:

Worldwide

II. PURPOSE:

The top surface of the mounting plate for the new Power Max II® stepper driver motors were painted black. When mounted on plastic assemblies, the paint can prevent a good ground connection.

A lack of proper grounding causes the system electrical noise to increase. The level of noise can be influenced by changes in site environment, component replacement, assay run profile and others. The level of electrical noise produced by improperly grounded motors can result in Liquid Level Sense errors.

To reduce the chance of an improper liquid detection, the TSB MUST BE DONE ON THE NEXT SERVICE CALL.

The purpose of this TSB is to remove the paint and improve the ground connection on the affected motors/assemblies. The assemblies are:

	Assembly C/N	Name
1	4-64646-01	RV Motor Assembly
2	4-64647-01	Reagent Motor Assembly
3	4-64649-01	Sample Motor Bracket Assembly
4	4-37040-02	Transfer Assembly
5	4-37930-01	Motor Pinion
6	4-37931-01	Sampl/Proc Crsl Motor
7	4-37933-01	RV Crsl/Reagent Crsl Motor

The manufacturing group has reworked all systems and parts in stock after March 21, 1997. The case of Power Max II® motors will continue to be black. However, the paint will be removed from all areas requiring a ground connection.

III. ADMINISTRATIVE NOTES:

This TSB implementation is Next Service Call. A rework process is required for each condition below:

1. Systems manufactured between S/N 8745 and 9751. Systems being installed must be reworked during installation.
2. Refurbished systems produced between Dec. 3, 1996 and March 21, 1997. Systems being installed must be reworked during installation.

   S/N 2354-96, 3445-96, 3906-96, 3966-96, 4152-96, 4280-96, 4359-96, 5124-96, 5189-96, 5340-96, 5541-96, 5662-96, 6875-96, 7003-96, 7011-96, 7410-96, 7913-96, 8253-96, and

8375-96.

3. Catalog Parts listed above that were shipped from Manufacturing between Dec. 3, 1996 and March 21, 1997. To insure proper functionality of the motors and assemblies, these should be reworked by the FSE/R.

4. Systems repaired with catalog parts described in #3 above. A single ungrounded motor can increase system noise levels. Any system repaired with effected part MUST be reworked using the appropriate procedure below.

International: This TSB does not require any parts.

USA: This TSB does not require any parts. This TSB should be closed in Field Watch as:
SC=03 TC=58 RC=93

IV. SPECIAL TOOLS:

None

V. PARTS:

REPLACED PARTS:
None

COMPATIBILITY:
All Cataloged Parts listed above that are stocked in depots or FSE/R kits must be reworked.

VI. PROCEDURE:

The procedures below are to address rework:

1. **During installation**: S/N 8745 to 9751 and refurbished systems.

   This modification must be performed during system installation. The procedure below must be performed before Probe Calibration, Fluidics Check, RV Test, Matrix Cell Load, etc.

   The Sample and Process procedures below **MUST** be done between the Installation Procedure sections; **SYSTEM POWER-UP** and **INSTRUMENT VERIFICATION.**

2. **Installed Manufactured Systems** S/N 8745 to 9751 and refurbished systems listed in ADMINISTRATIVE section.

   The procedures below for the Sample and Process Areas are required.

3. **Systems repaired with listed catalog parts** shipped from Manufacturing between Dec. 3, 1996 and Mar. 21, 1997.

   This TSB is required only on systems that have been repaired with one of the parts listed in PURPOSE section. A single ungrounded motor can increase system electrical noise level. To insure the system does not contain any of the listed parts, both the Sample and Process Area Procedures must be checked.

   NOTES:

   1. The body/case of the older Power Max I® motors were brush metal and do not require rework. The new Power Max II® motors are painted black and require rework.

   2. Manufacturing has reworked all motors and assemblies produced since Mar. 21, 1997. The black paint has been removed from the ground screw area.

   3. Catalog parts listed in PURPOSE section that are in either depots or FSE/R Kits may require rework. Rework is required for those parts shipped from Manufacturing between Dec. 3, 1996 and Mar. 21, 1997.

      Rework parts using procedures in the Catalog Part section below.

MODIFICATION STEPS:
Sample Area

1. If system power is ON, perform a SHUTDOWN [F2] and turn OFF power.
2. Using the following Service Manual Removal and Replacement Procedures, remove the following motors:

   RR - F2.4 RV Crsl Motor
   RR - F2.6 Reagent Crsl Motor

RR - F2.8 Sample Crsl Motor

NOTES:

1. During removal, check the area of the motor body where the ground screw is attached. If the area is brush metal, do not remove the motor from the bracket. Steps 3 to 7 below are not required for that assembly.
2. Label motors as they are removed. The RV and Reagent Motors are the same size and type.
3. Note the orientation of the of the motor as it is mounted on the bracket.
4. The motors have four mounting holes. Note/mark which is “used to attach the ground wire”. Refer to Figure 1.

3. To control the debris during filing, take the motors to a location where shavings can be controlled.

Remove Paint From Area Indicated

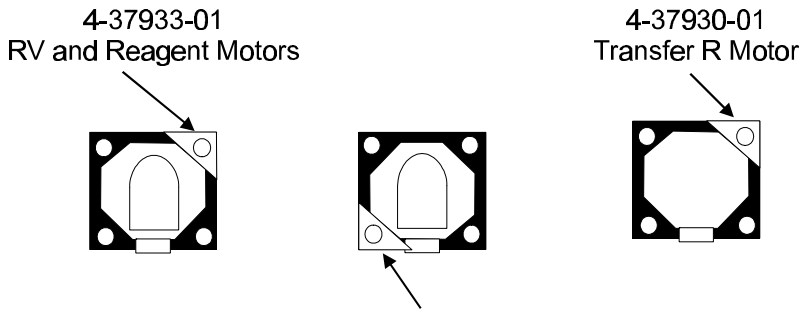


Figure 1

4. At the corners marked “used to attach the ground wire”, file the surface until all black paint is removed. Refer to Figure 1.
5. Using the Service Manual procedures, install motors, brackets and other assemblies (RV, Reagent, and Sample) removed in the RR procedures above.

   NOTES:

   1. Check that the ground cables are attached to the filed areas.
   2. Refer to the motor orientation noted above. Check to insure that the cable connection s are not under stress.
6. Using the OHM feature of the multimeter, check the resistance of your test leads. Measure the resistance between an unpainted surface of the motor and the Sample Plate. The resistance MUST be equal to that of the test leads. Approximately 0 Ohms.

   NOTE: If there is a difference between readings, remove the assembly and verify filed surface and ground connections.

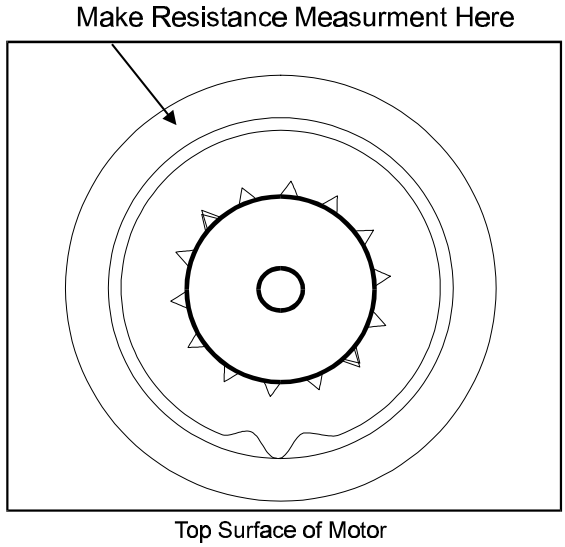


Figure 2

7. Repeat the measurement for all motors, which have been reworked in the sample kitting area.
8. Power up the system. At the Main Menu, perform a START-UP [F3]. If any device fails to home, recheck the connections made during the above steps and troubleshoot accordingly.
9. Continue with Process Area Procedure.

Process Area

1. If system power is ON, perform a SHUTDOWN [F2] and turn OFF power.
2. Using the following Service Manual Removal and Replacement Procedures, remove the following motors and assembly:

   RR - G3.4 Matrix Crsl Motor
   RR - G3.5 Process Crsl Motor
   RR - G1.8 Transfer Assembly

   NOTES:
   1. During removal, check the area of the motor body where the ground screw is attached. If the area is brush metal, do not remove the motor from the bracket. Steps 3 to 16 are not required for that Motor Assembly
   2. Label motors as they are removed. The Process and Matrix Motors are the same size and type.
   3. Note the orientation of the of the motor as it is mounted on the bracket.
   4. The motors have four mounting holes. Note/mark which is “used to attach the ground wire”. Refer to Figure 1.

3. Turn over the Transfer Assembly, and remove connector to the R-Axis Motor. Refer to Figure 3.
4. Remove the four screws holding the R-Axis Motor. Mark which mounting hole is “used to attach the ground wire”.

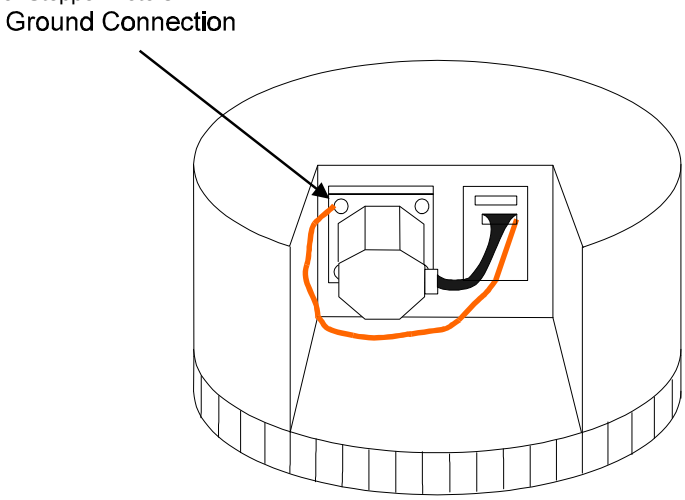


Figure 3

5. To control the debris during filing, take the Matrix, Process and Transfer R motors to a location where shavings can be controlled.
6. At the corners marked “used to attach the ground wire”, file the surface until all black paint is removed. Refer to Figure 1.
7. Using the Service Manual RR procedures, install the Matrix and Process motors. Do not install the Transfer Assembly at this time.
8. At the Transfer Assembly, reinstall the R-Axis Motor. During installation, check that the teeth motor gear and the arm are aligned.
9. Using the connector as a reference, check the orientation of the motor. Attach the ground cable to the area filed. Refer to Figure 3.
10. Check that the Transfer Arm moves freely. If the arm does not move freely. Remove the motor and repeat step 8.
11. At the motor, connect the W26 connector.
12. Connect the Transfer Assembly Cable W5 at the Process Distribution board J21.
13. Using the OHM feature of the multimeter, check the resistance of your test leads. Measure the resistance between an unpainted surface of the motor and the Process Plate. The resistance MUST be equal to that of the test leads. Approximately 0 Ohms.

    NOTE: If there is a difference between readings, verify filed surface and ground connections by repeating steps 2 through 13.
14. Repeat the measurement for the Process and Matrix Carousel Motors.

    NOTE: If there is a difference between readings, remove the assembly and verify filed surface and ground connections.
15. Using the Service Manual Removal and Replacement Procedure, RR-G1.8, install the transfer assembly.
16. Power up the system. At the Main Menu, perform a START-UP [F3]. If any device fails to home, recheck the connections made during the above steps and troubleshoot accordingly.
17. Continue with CHECKOUT Procedure.

Catalog Parts

Before installing any of parts listed in section PURPOSE above, rework the parts using the appropriate procedure below.

Transfer Assembly 4-37040-02

1. Turn over the Transfer Assembly, check the area of the motor body where the ground screw is attached. If the area is brush metal, do not remove the motor and proceed to step 9.
2. Remove connector to the R-Axis Motor. Refer to Figure 3.

3. Remove the four screws holding the R-Axis Motor. Mark which mounting hole is “used to attach the ground wire”.
4. To control the debris during filing, take the Transfer R motors to a location where shavings can be controlled.
5. File the area indicated in Figure 1.
6. Reinstall the motor. Check that the teeth motor gear and the arm are aligned. Refer to Figure 3.
7. Check that the Transfer Arm moves freely. If the arm does not move freely. Remove the motor and repeat step 6.
8. At the motor, connect the W26 connector.
9. Install the Transfer Assembly using Service Manual Procedure RR - G1.8

Motors

4-37930-01 Motor Pinion

4-37391-01 Sample/Process Crsl Motor (Also used on Matrix Crsl)

4-37393-01 RV Crsl/Reagent Crsl Motor

Before installing the motor, remove the paint from the area indicated in Figure 1.

Bracket Assemblies

4-64646-01 RV Motor Assembly

4-64647-01 Reagent Motor Assembly

4-64649-01 Sample Motor Bracket Assembly

1. Check the area of the motor body where the ground screw is attached. If the area is brush metal, do not remove the motor from the bracket.
2. Remove the four screws holding the motor and ground wire to the bracket assembly.
3. To control the debris during filing, take the motor to a location where shavings can be controlled.
4. File the area indicated in Figure 1.
5. Reinstall the motor and ground wire.
6. Check that the ground wire is firmly attached at the location indicated in Figure 1.

CHECKOUT:

1. RV Load Test VP-42
2. Matrix Cell Load Test VP-43
3. Using the Lap Top Diagnostics Software, select Perform Test and then LLS Noise Test.
   a. At the Test Menu, select and run Options 1 - Sample Segment, 3 - RV (Sample Side) and 4 RV (Process Side).

      NOTE: DO NOT RUN Option 2 - Reagent Pack Test. The test monitors the wrong LLS bit.

   b. If during the test noise is detected (zero bits displayed), check the cable and ground connections at the area antenna(s) and area motors.

      NOTE: DO NOT remove or rework the ground connections on either the Process or Sample Pipettors.

      NOTE: If continued failure occurs, contact your area Technical Support or CSE.

4. Process Probe Cal VP-21
5. Sample Probe Cal VP-25
6. LLS Test VP-41

Sample RV [F3]
Process RV [F6]
Sample Cup Test [F5]
Do Not Run the Reagent Pack Test

7. Reagent Actuator Cal VP-27
8. Fluidics Check VP-49
9. Total Service Call
10. Control Run Minimum two MEIA and two FPIA assays VP-19

MODIFICATION CONTROL STICKER UPDATE:
Mark TSB 58 on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Software Version 3.01 Upgrade

TSB#: **83-057**

ORIGINATOR: **Rod Defibaugh**
APPROVED: **Mark Slater 07/JAN/97**

PRODUCT:
AxSYM® (83)

REF. ECN: **11835-005**

IMPLEMENTATION:	TSB Part/Kit #: **LN 01D02-01**	Upgrade Time: **3.0 Hrs.**
○ Immediate ○ Next Service Call ● Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **07-JAN-97**	Validation Time: **1.0 Hr.**
Instruments Requiring Modification: **S/N 8976 & below**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **4.0 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:

Worldwide

II. PURPOSE:

A. Version 3.01 software was developed to correct a condition discovered in V 3.0. Memory used when ordering controls is not being returned to the memory pool after use. As available memory decreases, the following system errors could occur:

1) System lockup VRTX ERROR 0003

2) Low Level Message 9161 Internal Database Error: 146

3) Low Level Message 9049 Internal Software Error, Memory allocation ...

Available memory is returned to the memory pool by cycling power as required during weekly maintenance.

B. **COPY DEFAULTS TO DATA DIR** Feature Change

Version 3.01 changes the Version 3.0 Maintenance\System Backup Menu option COPY DEFAULTS TO DATA DIR. CARE SHOULD BE TAKEN TO INFORM THE FIELD OF THIS DIFFERENCE.

Version 3.0 RETURNS **ALL DATA FILES** TO DEFAULT.

Version 3.01 RETURNS ONLY RESULT, SAMPLE, QC RESULT, SEGMENT, and MESSAGE HISTORY TO DEFAULTS.

NOTE: Before using this feature, ALWAYS check the software version. Refer to the "VI. PROCEDURE" section below.

C. **Italian Language**

Software version 3.01 includes the Version 3.00a (TSB 83-054) corrections to the Italian translation.

III. ADMINISTRATIVE NOTES:

Software Version 3.01 has been designed to be installed by the customer. When customers report one of the conditions described in section II. A., the Customer Support Groups will send them a Software Version 3.01 Upgrade Kit (LN 01D02-01).

Once installed, the FSE/R will verify software installation and mark the TSB Modification Control Sticker during the next service call.

If a Field Service call is required prior to customer installation, an alternate Copy File

procedure has been developed. This procedure will reduce the installation time by approximately 20 minutes.

S/N Less than 6807

After upgrading these systems to 3.01 Software, it is advised that ISA 83-066 should be performed to correct database corruption that may have occurred with software versions prior to V 3.0.

NOTE: This procedure will not be required on systems if ISA 83-066 was performed since upgrade to V 3.0.

The procedure will use the Version **3.01** Copy Default To Data Dir feature to return Result, Sample, QC_Result, Segment and Msglog Files to default. THE CUSTOMER MUST ARCHIVE PATIENT RESULTS AND PRINT QC DATA BEFORE USING THIS PROCEDURE.

International: This software will be distributed through the order entry system. The countries should send forecast requirements to their responsible logistics organization and reference LN 01D02-01.

NOTE: This modification is to be installed only on systems that have experienced one of the failures described in Section II.A. Data from the Customer Support Group will be required to forecast the number of upgrade kits required.

USA: This software version will be released by the Customer Support Center and distributed through the RZZ system.

If an FSR installs the software, follow the instructions below:

This TSB should be closed in Field Watch as
SC=03 TC=57 RC=93

IV. SPECIAL TOOLS:

AxSYM System Backup Floptical Diskette LN 05B72-01

V. PARTS:

Software Version 3.01 Upgrade Kit (LN 01D02-01) contains the following:

AxSYM Version 3.01 Installation Instructions P/N 79759-102
AxSYM System Version 3.01 Floptical Diskette

REPLACED PARTS:
None

COMPATIBILITY:
Version 3.01 is not compatible with software versions prior to version 2.0.

VI. PROCEDURE:

There are four installations options:

A) Systems with software version less than 2.0.

B) Customer performs upgrade.

C) Abbott Personnel On-site Upgrade

D) FSE/R on site using the File Copy procedure.

DETERMINE CURRENT SYSTEM SOFTWARE VERSION

From the MAIN menu, select CONFIGURATION then INSTALLATION.
The software version is displayed in the top right corner of the screen.

MODIFICATION STEPS:

Installation Options:

A) Systems with software version less than 2.0

Install version 3.01 using VP-57 Install System Software in the Service Manual. During that procedure the format hard drive option MUST be used.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

B) Customer performed Upgrade

1) From the Main Menu, select CONFIGURATION then INSTALLATION.
2) Check that the field in the top right portion of the screen indicates that Version 3.01 software is installed.
3) Ensure that a Full Backup of Version 3.01 was performed. If customer has additional backup disks, recommend that a FULL BACKUP be performed on each disk.
4) Go to the MARK MODIFICATION CONTROL STICKER UPDATE section below.

C) Abbott Personnel On-Site Upgrade

Perform the upgrade using the AxSYM System Software Version 3.01 Installation Instructions included in the Software Version 3.01 Upgrade Kit (LN 01D02-01).

Ensure that a Full Backup of Version 3.01 was performed. If customer has additional backup disks, recommend that a FULL BACKUP be performed on each disk.

Go to the CHECKOUT procedure below.

D) FSE On-Site using File Copy Procedure

NOTE: This procedure can be used ONLY on systems that are currently at Software Version 3.0.

1) Using the AxSYM System Software Version 3.01 Installation Instructions included in the Software Version 3.01 Upgrade Kit (LN 01D02-01) perform the following:
   a) Verify System Software is 3.0.
   b) Print the current GENERAL CONFIGURATION screens.
   c) Perform a Backup of the current system software. Label the disk V3.0 Backup.
2) Log On as FSE.
3) Go to the H: Prompt by pressing CTRL F2.
4) Insert the AxSYM System Version 3.01 Floptical Diskette in the Floptical Drive.
5) At the H:\ prompt, type the following:
   a) `COPY F:\AXSYM.SYS H:\`

   Press Enter. System responds `1 File Copied`

   b) `COPY F:\AXSYM\CONFIG\DATA.BAT H:\AXSYM\CONFIG`

   Press Enter. System responds `1 File Copied`

   c) `COPY F:\AXSYM\CONFIG\VERSION.INI H:\AXSYM\CONFIG`

   Press Enter. System responds `1 File Copied`

   d) `COPY F:\AXSYM\LANGUAGE\UIMAINI.RES H:\AXSYM\LANGUAGE`

   Press Enter. System responds `1 File Copied`
6) Press CTRL F2. At the Main Menu, perform a SHUTDOWN and power off.
   a) Remove the floptical disk from the drive.
7) Power the system on. At the Main menu, select the CONFIGURATION, then INSTALLATION screen. Check that the version number displayed is 3.01
8) Follow installation instructions, for Updating General Configuration.
9) Ensure that a Full Backup of Version 3.01 is performed. Label the disk(s) as V 3.01 Backup. If customer has additional backup disks, recommend that a FULL BACKUP be performed on each disk.
10) Go to the CHECKOUT procedure below.

CHECKOUT:

1) Perform a Total Call. Run controls on all assays.

2) Go to the MARK MODIFICATION CONTROL STICKER UPDATE section below.

3) Log Off as FSE.

MODIFICATION CONTROL STICKER UPDATE:
Mark TSB 57 on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Custom Tube Segment Installation (MDS - Canada Only)

TSB#: **83-056**

ORIGINATOR: **Jane Hughes**
APPROVED: **Mark Slater 27/JAN/97**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-11598**

IMPLEMENTATION: ○ Immediate ○ Next Service Call ● Next Failure ○ Optional Instruments Requiring Modification: **Instruments at MDS Canada sites only.**	TSB Part/Kit #: **N/A** TSB Effectivity/ Part(s) Availability: **27-JAN-97** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **0.5 Hr.** Validation Time: **1.0 Hr.** Total Mod. Time: **1.5 Hrs.** ****NOTE** The instrument must be at TSB Level 52A prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
This procedure needs to be performed in order to be able to use the Custom Tube Sample Segments. These segments are only in use at the MDS reference laboratory in Toronto, Canada and its satellite labs. This procedure is needed to retain the probe alignment parameters (ISA 48A Probe Alignment Procedure or the tubalign or cupalign procedure in Diagnostic Software). The AxSYM® System will need to be at Revision 3.0 or greater.

A system backup must be performed following this procedure to provide the customer with a copy of these changes. This procedure must be performed if software is reloaded/restored by any other method beside the backup performed following this procedure.

Use only tubes made specifically for these segments (see the package insert included with the segments for more information). Yellow segment barcode labels must be used with these segments. The dead volume for this tube is 200 uL, therefore additional sample for testing must be added to this volume.

III. ADMINISTRATIVE NOTES:
USA: This TSB is specific to MDS- Canada only.

INTERNATIONAL: This TSB is specific to MDS- Canada only. The international Service Manager should send forecast requirements to their responsible logistic organization based on the number of instruments affected in your area. Please reference TSB 83-056 on forecast requirements.

IV. SPECIAL TOOLS:
AxSYM® System Software Diskette (version 3.0 or greater)

V. PARTS:

LN	Description	Qty
5C92-01	Custom Tube Segment	2 segments each

REPLACED PARTS:
N/A

COMPATIBILITY:
May be run in conjunction with aliquot and primary tube segments.

VI. PROCEDURE:

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

MODIFICATION STEPS:

ALL ENTRIES FROM AxSYM KEYBOARD at H: PROMPT (USE CONTROL F2).

1. Print wells.dat

   A. TYPE “cd axsym\system\” PRESS <enter>
   “copy wells.dat h:\axsym\spool\print1” PRESS <enter>
   display reads “1 files copied”
   (the printout will take a minute or so to print)
   MARK THIS PRINTOUT AS ORIGINAL

   B. From printed report find the segment parameters (these parameters print last). Note these 2 values (you will need them again in this procedure).
   X = 7ml tube
   KIT R OFF XXXX
   Y = sample cup adapter
   KIT R OFF XXXX

2. **Copy wells.dat** from rev 3.0 software disk to H:\axsym\system

   A. Insert AxSYM system software diskette into floppy drive of AxSYM.

   B. TYPE “copy f:\axsym\system\wells.dat” PRESS <enter>
   “read_sys_files” PRESS <enter>
   (This copies the wells.dat file into the RAM.)

3. **CALCULATE New** value: (the values of 1256 and 1279 are the default values that are now in the system from copying the default Wells.dat file)
   Using value of “Y” from step 1.B:

   New value = (Y -1256) + 1279 EXAMPLE: Y = 1254

   New value = (1254 - 1256) + 1279 =1277.

4. Enter **New value**:
   On AxSYM keyboard
   TYPE “sample_seg_type 7ml” PRESS <enter>
   “sample_cup_adapter true” PRESS <enter>
   “sam_r_cal XXXX” (**New value**) PRESS <enter>
   “sam_r_cal” PRESS <enter>
   (value displayed should be **New Value**)

5. Type “more wells.dat” PRESS <enter>
   (The file will scroll to the end where these values are located.)

   Check display for the following values:

   A. 10ml Sample Tube — KIT R OFF will now equal 1264
   KIT Z OFF will now equal - 30

   Sample cup adapter — KIT R OFF will now equal “Y”,
   (“Y” is the value you entered by performing step 4.)

   a. If these values are correct, go to step 6.

   b. **If these values are not correct**, start again at step 2.

6. Enter 7ml tube KIT R OFF:
   TYPE “sample_cup_adapter false” PRESS <enter>
   “sam_r_cal XXXX” (use value of “X” from step 1.B) PRESS <enter>
   “sam_r_cal” PRESS <enter>
   (value printed should be value of “X”)

7. Print wells.dat. (type “copy wells.dat h:\axsym\spool\print1” PRESS <enter>)
   Your values should be the following:
   (if they are incorrect, repeat entire procedure starting at step 2):

```
7ML SAMPLE TUBE
      KIT R OFF      X
10ML SAMPLE TUBE
      KIT R OFF      1264
      KIT Z OFF      -30
SAMPLE CUP ADAPTER
      KIT R OFF       Y
```

8. Type read_sys_files. (This copies the wells.dat file into RAM.)
9. Perform a system backup. NOTE: This is extremely important to maintain a copy of these changes for the customer.

CHECKOUT:
Both types of tube segments will continue to be needed. [Aliquot (or Primary) segments will continue to be needed to run controls.] Therefore, both ordinary tube segments with cup adapters and tubes, AND custom tube segments with the custom tubes should be run to validate probe positioning. Run 3-4 samples in each segment in different carousel positions. Use at least one empty cup and tube for each case to be certain there is no probe crash in this instance. According to the package insert, cals and controls need to be run in sample cup adapters in tube segments. Ensure that sample probe is at least 1/8" from the side of the tube.

MODIFICATION CONTROL STICKER UPDATE:
Mark off Control Mod Sticker number 56.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Improper Output Power Setting on MEIA Optics

TSB#: **83-055**

ORIGINATOR: **Emile Diou**
APPROVED: **Christie McCain 8/29/96**

PRODUCT:
AxSYM® (83)

REF. ECN: **N/A**

Trademark: AxSYM is a registered trademark of Abbott Laboratories.

IMPLEMENTATION:	TSB Part/Kit #: **4-37057-01**	Upgrade Time: **0.5 Hrs.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **29-AUG-96**	Validation Time: **1.0 Hrs.**
Instruments Requiring Modification: **See ADMINISTRATIVE NOTES below.**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.5 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
International and USA

II. PURPOSE:
The purpose of this TSB is to inform the field that the output power settings on the MEIA optics assembly have been improperly set in manufacturing. This will result in a higher lamp current and will reduce the overall expected life of the lamp.

III. ADMINISTRATIVE NOTES:
Instruments requiring modification are S/N:

7137, 7156, 7160, 7161, 7165, 7167 - 7169, 7171 - 7173, 7175, 7180, 7182, 7184 - 7192, 7195 - 7198, 7200 - 7202, 7207, 7211, 7212

USA: This TSB should be closed out in Field Watch a follows:

SC=03 TC=55 RC=93

Parts will be shipped per IRL.

International: The international Service Manager should send forecast requirements to their responsible logistic organization based on the number of instruments effected in your area. Please reference TSB 83-055 on the forecast requirements.

IV. SPECIAL TOOLS:
N/A

V. PARTS:
4-37057-01

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

VI. PROCEDURE:

MODIFICATION STEPS:
Refer to MEIA Optics RR-G1.13.

Removal:

1. From the MAIN Menu:

   Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

Perform Shutdown (F2)
When instructed turn the AC power off.

2. Open top cover.
3. Open Disk Drive door.
4. Unscrew the 2 captive thumbscrews and open the power supply panel.
5. Disconnect Cable (W22 Power Supply) from the MEIA power supply.
6. Disconnect (yellow) MEIA lamp cable between the power supply and the optics assembly.
7. Remove MEIA Optics Assy.
   a. Disconnect Heater cable (W150 PMT) from optics assy.
   b. Unscrew thumbscrew holding optics shield to optics assy.
   c. Remove tubing from the shield.
   d. Remove optics board shield from the optics.
   e. Disconnect the following cables J6 (W63), J4 (W61), J6 (W60), J2 (W20) from the optics assy.
   f. Remove 3 screws holding optics assy. to the process plate.
   g. Remove screw holding the ground wire to the process plate.
   h. Lift up the optics in order to remove it.

Replacement:

1. Install the new optics in reverse order (ensure the cabling to the matrix carousel home sensor is not pinched).

CHECKOUT:

1. Perform a Temperature Calibration (VP - 32)
2. Edit MEIA Gain Value (VP - 37)
3. MEIA Station Calibration (VP - 38)
4. MEIA Optics Initialization (VP - 40)
5. Perform Total Service Call.
6. Ensure the operator understands that all assays must be recalibrated and all levels of Controls should be run prior to reporting patient samples.

MODIFICATION CONTROL STICKER UPDATE:

1. Mark off Control Mod Sticker number 55.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Italian Software Version 3.00a Update

TSB#: **83-054**

ORIGINATOR: **Jack Hall**
APPROVED: **Christie McCain 8/8/96**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-11783-000**

IMPLEMENTATION:	TSB Part/Kit #: **79803-101**	Upgrade Time: **1.50 Hrs.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **26-AUG-96**	Validation Time: **0 Hrs.**
Instruments Requiring Modification: **Italian Language Configured Only**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.50 Hrs.** ****NOTE** The instrument must be at TSB Level 52 prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
The purpose of this TSB is to inform the field of the release of Software Version 3.00a, Italian Supplemental Software. This software is specifically designed to be used in conjunction with Version 3.0 Software AxSYM Systems utilizing the Italian language format. This software corrects two observed problems. The two problems are:

1. In the Results screen, the F5 Rerun button is incorrectly translated to TUTTO instead of RIPETI.
2. In the Results/Stored Results screen, when results are selected and the Print key is pressed, the 3rd print option " Print Formatted Sample Report " is not displayed.

III. ADMINISTRATIVE NOTES:
USA: This TSB does not Apply.

International: This TSB is for AxSYM instruments that are configured in the Italian Language ONLY.

IV. SPECIAL TOOLS:
N/A

V. PARTS:

Part Number	Description	Qty
79803-101	Software Version 3.00a Supplemental Disk	1
79804-101	Software Restore Disk	1
82-9849/R1	Customer Letter	1

REPLACED PARTS:
N/A

COMPATIBILITY:
Only compatible with TSB 83-052A (3.0 system software).

VI. PROCEDURE:

MODIFICATION STEPS:
NOTE: For an AxSYM® analyzer that is operating in Italian, install Revision 3.0 software as outlined in TSB 83-052A before performing this upgrade. DO NOT perform the System Backup (step 13 of TSB 83-052A).

1. From the Main menu, Press F6 and Log onto the system as FSE.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

2. Press the CTRL_F2 key and the screen will display the H:> prompt.
3. Insert the Italian Supplemental Software disk.
4. At the H:> prompt, type the following command:
   CD AXSYM/LANGUAGE <enter>
5. At the H:/AXSYM/LANGUAGE> prompt, type the following command:
   COPY F:*.RES <enter>
   The AxSYM should respond 1 file copied.
6. At the H:/AXSYM/LANGUAGE> prompt, type the following command:
   CD .. <enter>
7. At the H:/AXSYM> prompt, type the following command:
   CD CONFIG <enter>
8. At the H:/AXSYM/CONFIG> prompt, type the following command:
   COPY F:*.INI <enter>
   The AxSYM® should respond 1 file copied.
9. Press the CTRL-F2 key to re-display the main menu and remove the Supplemental Software Disk.
10. Press F2 (Shutdown) and reboot the system by cycling the power. During the bootup process the screen will display "Version 3.00a". This verifies that the Version.INI file was copied over correctly. The current system version can also be viewed in the CONFIGURATION/INSTALLATION Screen.
11. From the Main Menu select the Results screen and select a Result. The F5 key should display RIPETI. This verifies that the UIMAINI.RES was copied correctly. If no results are present select STORED RESULTS from the Main Menu. Select VIEW STORED RESULTS, Select a result and press the Print key and the third option should appear (print a formatted Sample Report).
12. Insert the Software Restore Disk (part number 79804-101). Perform a Full System Backup.
13. When the Backup is complete, insert the Software Restore Disk and press the CTRL_F2 keys at the H:> prompt Type the following commands:
    F: <enter>
14. At the F:> prompt type the following command:
    CD AXSYM/DATA <enter>
15. At the F:AXSYM/DATA> prompt type the following command:
    COPY H:/AXSYM/DATA/DEFAULTS/*.* <enter>
    The AxSYM® should respond 107 files copied.
    This will reset all AxSYM data files on the Software Restore Disk back to the default value.
16. When the copy process is complete, remove the disk from the drive. Lock the disk by opening the hole on the top left corner. This will be the customer's copy of the Version 3.00a Software disk. DO NOT USE THIS DISK FOR FUTURE SYSTEM BACKUPS.
17. Using a blank floptical disk perform a Full System Backup. This disk will be the customer's backup disk and can be used for future Update Backup procedures.

NOTE: The original Version 3.0 System Software Disk must be removed from the customer site.

Leave the Software Restore Disk and the Customer Letter with the customer.

CHECKOUT:
N/A

MODIFICATION CONTROL STICKER UPDATE:
Mark off 54 on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
3.0 System Software

TSB#: **83-052B**

ORIGINATOR: **Jack Hall / Joe Berry**
APPROVED: **Bob Schabel 7/March/97**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-11749-000**

IMPLEMENTATION:	TSB Part/Kit #: **LN 05C86-01**	Upgrade Time: **3.0 Hrs.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **07-MAR-97**	Validation Time: **0.5 Hr.**
Instruments Requiring Modification: **< 6807**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **3.5 Hrs.** ****NOTE** The instrument must be at TSB Level 38A prior to performing this TSB.**

THIS TSB SUPERSEDES TSB 83-052A. REMOVE TSB 83-052A AND REPLACE WITH THIS DOCUMENT. CHANGES IN THIS DOCUMENT ARE INDICATED WITH A ➔ IN THE MARGIN.

I. DISTRIBUTION:

Worldwide

➔ **NOTE: This TSB is being updated to provide the correct procedure to upgrade systems from Version 2.33 to Version 3.0 software (MDS - Canada ONLY).**

NOTE: If this software is being installed on an Italian Language configured AxSYM® analyzer by an Abbott Representative, do *not* perform step 13 of the TSB. TSB 83-054 *must* be installed at this time.

II. PURPOSE:

The purpose of this TSB is to instruct the field on how to install Version 3.0 software.

New Features: (Refer to the Version 3.0 Addendum in software upgrade kit for more detail)

- Reflex Testing
- Capabilities for B12/ Folate (Currently Under Development)
- Faster System Backup
- Multi-Segment
- Bar Code Wand Replaced by a Wedge Reader LN 8B90-01 (on new installs or when wand fails)
- Create Multiconstituent Control Orders by Panel/Edit MCC Orders
- 9161 Error Corrections
- MDS Segments (Canada)

FSE/CSC Features:

- The Ability to Copy Logs and Defaults Without Using a Lap Top (screen located under Maintenance, System Backup)

System Backup Menu:	**Time Required**
Full Backup - Copies complete System Backup to a floptical diskette	60 min. for Backup 15 min. for Warm-up
Update Backup - Copies current Data files to a floptical that contains previous full backup.	25 min. for Backup 15 min. for Warm-up
System Restore - Copies all system and data files from floptical to the hard drive	30 min. for Copy 60 min. for Warm-up

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

NOTE: The Features listed below allow CSE to help the FSE/FSR troubleshoot problems. Log On must be FSE or CSC to access.

Copy Results/LLS Logs - Copies Result and LLS logs to a floppy diskette (Use of the LLS log still under development)	10 min. for Copy
Copy Host Log - Copies the last information set downloaded from the Host to a Floppy Diskette	5 min. for Copy
Copy Trace/UI Logs - Copies Trace and UI logs to a floptical diskette	15 min. for Copy
System Lockup Backup - Copies Logs Directory and Data Directory to a floptical diskette	30 min. for Copy
Copy Defaults to Data Directory - Copies the Default Database to the Data Directory	5 min. for Copy 15 min. for Warm-up

CAUTION: This procedure resets **ALL** of the files in the database to a default value. **All data is lost.**

Copy Segment Defaults - Copies the Default Segment Files to the Data Directory	5 min. for Copy

III. ADMINISTRATIVE NOTES:

International: This software will be distributed through the order entry system. The countries should send forecast requirements to their responsible logistic organization. Please reference LN 05C86-01 on forecast requirements.

USA: This software version will be distributed through the RZZ system. The software will be sent to the Sales Force. The Sales Force will deliver the software to the customer site.

If an FSR installs the software, follow the instructions below.

This TSB should be closed in FieldWatch
SC = 03 TC = 52 RC = 93

Insure that the customer calls 1-800-297-9630 and provides us with the following information:

Customer Name
Laboratory Name
Serial #(s) of all AxSYM® instruments in laboratory
Date Upgrade Completed

➔ **NOTE: If the current system software is 2.33 the upgrade to 3.0 software must be installed by an FSE/FSR. All Robotics Calibrations (VP-22, VP-25, VP-27, VP-29, VP-38) must be redone including ISA 83-048A Probe Alignment Procedure and TSB 83-056 Custom Tube Segment Installation (MDS - Canada Only).**

IV. SPECIAL TOOLS:

NONE

V. PARTS:

The 3.0 Software Upgrade Kit (LN 05C86-01) contains:

> AxSYM System Software Version 3.0 Addendum
> AxSYM System Software Version 3.0 Floptical Diskette (LN 05C85-01)
> AxSYM System Software Version 3.0 Customer Letter
> AxSYM System Software Version 3.0 Installation Instructions

REPLACED PARTS:
N/A

COMPATIBILITY:
After this software has been installed, the AxSYM analyzer cannot be downgraded to an older software revision.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

VI. PROCEDURE:

NOTE: The instrument must be at TSB level 83-038A and a Current Back-up should be made if the customer does not have one before performing this procedure.

➔ **NOTE: If the current system software is 2.33 the upgrade to 3.0 software must be installed by an FSE/FSR following Procedure B below. All Robotics Calibrations (VP-22, VP-25, VP-27, VP-29, VP-38) must be redone including ISA 83-048A Probe Alignment Procedure and TSB 83-056 Custom Tube Segment Installation (MDS - Canada Only).**

➔ **NOTE: If the current system software is NOT 2.33, the upgrade to 3.0 MUST be installed following Procedure A below.**

MODIFICATION STEPS:

Procedure A:

1. Print the General Configuration parameters from the current software version.
2. Select CONFIGURATION from the main menu.
3. Select INSTALLATION from the CONFIGURATION screen. If system is at Version 2.33 perform ISA 48A after completing the upgrade.
4. Select F6 - INSTALL VERSION .
5. At the system prompt, insert the new System Version 3.0 floptical diskette into the drive.
6. Select OK. During the bootup process the Abbott "A" logo is displayed for approximately five minutes. When bootup is complete, the Language Installation screen is displayed.
7. Select Language desired.
8. Select PERFORM SOFTWARE INSTALLATION ONLY.

   CAUTION: Do not select the option FORMAT HARD-DRIVE PRIOR TO INSTALLING SOFTWARE

9. Select OK. The system will display the In Progress pop-up screen as it loads the new software. This will take approximately 30 minutes.
10. At the system prompt remove the floptical diskette.
11. Select OK. After approximately 30 seconds the main menu will be displayed.
12. The AxSYM® System Software Version 3.0 General Configuration must be updated. > Edit the General Configuration to match the print out made in Step 1. > Select general configuration parameter "42, Transmit Multiple Result Flags to Host>"

    NOTE: If you have not previously edited General Configuration "Error code 9019 AxSYM General Configuration update required" will be displayed.

    Select OK to continue.
    > Press the space bar.
    > Select F6-SAVE

13. Perform a System Backup.

➔ **Procedure B:**

➔ 1. Perform a System Backup.

➔ 2. Insert the System Version 3.0 floptical diskette into the drive.

➔ 3. Log on as FSE and access the H:> by pressing Control/F2 keys simultaneously.

➔ 4. At the H:>:

Type **F: [ENTER]**
System should respond with F:>
Type **CD AXSYM\SYSTEM [ENTER]**
System should respond with F:>AXSYM\SYSTEM
Type **COPY ROBO.CAL H:AXSYM\SYSTEM [ENTER]**

System should respond with "1 File(s) copied"

➔ 5. Remove the System Version 3.0 diskette from the drive.

➔ 6. Press Control/F2 to exit back to the Main Menu.

➔ 7. Perform the upgrade to System Version 3.0 as described in Procedure A, Steps 1 - 12.

➔ 8. Perform the following Robotics Calibrations:

VP-22 Process Probe Calibration
VP-25 Sample Probe Calibration
VP-27 Reagent Actuator Calibration
VP-29 Sample bar Code Calibration
VP-38 MEIA Station Calibration
ISA 83-048A Probe Alignment Procedure
TSB 83-056 Custom Tube Segment Installation (MDS - Canada Only)

➔ 9. Perform a System Backup.

CHECKOUT:

1. Perform a Total Service Call.

MODIFICATION CONTROL STICKER UPDATE:
Mark off TSB 52 on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
MEIA Optics

TSB#: **83-051**

ORIGINATOR: **David Otterman**
APPROVED: **Christie McCain 11/22/95**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **4-37057-01**	Upgrade Time: **0.5 Hrs.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **13-NOV-95**	Validation Time: **1.0 Hrs.**
Instruments Requiring Modification: **See ADMINISTRATIVE NOTES below.**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.5 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:

International and USA

II. PURPOSE:

Output power from the Mercury Vapor Lamp, used in the MEIA optics assembly, has been found to be approximately double what it normally is. The lamp current (found in Diagnostic Controls) is approximatley twice as much as normally seen.
Therefore, replacement of the MEIA optics assembly for the AxSYM® instrument serial numbers below will be necessary.

III. ADMINISTRATIVE NOTES:

Instruments requiring modification are S/N:

4617, 4633, 4643, 4648, 4651, 4652, 4657, 4660, 4661, 4663 - 4787, 4789 - 4797, 4799 - 4809, 4813 - 4815, 4818 - 4822, 4824, 4827, 4829

USA: This TSB should be closed out in Field Watch a follows:
SC=03 TC=51 RC=93
Parts will be shipped per IRL

International: The international Service Manager should send forecast requirements to their responsible logistic organization based on the number of instruments effected in your area. Please reference TSB 83-051 on forecast requirements.

Completion of this TSB will be tracked. Country Service Managers are to report on a monthly basis the total number of TSB's to be performed, number of upgrades completed this month, and total systems upgraded to date. Please send this information to J.P. Bernou in Delkenheim by the end of each month.

IV. SPECIAL TOOLS:

N/A

V. PARTS:

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

VI. PROCEDURE:

MODIFICATION STEPS:
(RR-G1.13)
Removal:

1. From the MAIN Menu:
   Perform Shutdown (F2)
   When instructed turn the AC power off.
2. Open top cover
3. Open Disk Drive door
4. Unscrew 2 captive thumbscrews and open power supply panel.
5. Disconnect Cable (W22 Power Supply) from the MEIA power supply.
6. Disconnect (yellow) MEIA lamp cable between the power supply and the optics assembly.
7. Remove MEIA Optics Assy.
   a. Disconnect Heater cable (W150 PMT) from optics assy.
   b. Unscrew thumbscrew holding optics shield to optics assy.
   c. Remove tubing from the shield.
   d. Remove optics board shield from the optics.
   e. Disconnect the following cables J6 (W63), J4 (W61), J6 (W60), J2 (W20) from the optics assy.
   f. Remove 3 screws holding optics assy. to the process plate.
   g. Remove screw holding the ground wire to the process plate
   h. Lift up the optics in order to remove it.

Replacement:

1. Install the new optics in reverse order (ensure the cabling to the matrix carousel home sensor is not pinched).

CHECKOUT:

1. Perform a Temperature Calibration (VP - 3)
2. Edit MEIA Gain Value ((VP - 37)
3. MEIA Station Calibration (VP - 38)
4. MEIA Optics Initialization (VP - 40)
5. Perform Total Service Call.
6. Ensure the operator understands that all assays must be recalibrated and all levels of Controls should be run prior to reporting patient samples.

MODIFICATION CONTROL STICKER UPDATE:

1. Mark off Control Mod Sticker number 51.

END OF DOCUMENT
END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
LLS Board

TSB#: **83-050**

ORIGINATOR: **Harry Durstine**
APPROVED: **Mark Slater 10/27/95**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **4-37440-02**	Upgrade Time: **0.25 Hrs.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **27-OCT-95**	Validation Time: **0.75 Hrs.**
Instruments Requiring Modification: **SN 4840 and below**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.0 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
Changes are being made to the Liquid Level Sense (LLS) Board to reduce the potential for electrostatic discharges to cause premature level sensing. A "paddle board" is being added to both the sample and process side of the LLS board. The paddle board circuitry will ensure that the Z-axis motor stops whenever an LLS detect signal occurs due to static discharge in a sampling vessel. The paddle board circuitry will then cause the AxSYM to generate an LLS error (Air During Aspiration, Liquid Too Low, etc.) Diodes are also being added to the board circuitry. The diodes reduce the susceptibility of the fluid sense board to prematurely level sense whenever static discharges occur in the sampling vessel.

III. ADMINISTRATIVE NOTES:
U.S.A. This TSB should be closed in FieldWatch SC = 03 TC = 50 RC = 93

International: The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-050 on forecast requirements.

Europe: Completion of this TSB will be tracked. Country Service Managers are to report on a monthly basis the total number of TSBs to be performed, number of upgrades completed this month and total number upgraded to date. Please send this information to J.P. Bernou in Delkenheim by end of each month.

IV. SPECIAL TOOLS:
N/A

V. PARTS:

REPLACED PARTS:
Return old LLS boards (for rework). **Material availability is dependent on their prompt return.**

COMPATIBILITY:
N/A

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

VI. PROCEDURE:

MODIFICATION STEPS:

1. From Main Menu, perform [F2] Shutdown.
2. Turn off power when instructed.
3. Access Card Cage. Disconnect:
   - W73-J201
   - W71-J202
   - W76-J101
   - W74-J102
4. Remove LLS board.
5. Check jumpers J105 and J205 on the new LLS board. Both jumpers should be across pins 1 and 2.
6. Install the new board. Connect the 4 cables.

CHECKOUT:

1. Power up and perform [F3] Startup.
2. Perform:
   Process Probe Calibration (VP-22)
   Sample Probe Calibration (VP-25)
   LLS Test (VP-41)
   Fluidics Check (VP-49)
3. After completion of this TSB, perform a Total Service including running controls for at least one FPIA and one MEIA assay.

MODIFICATION CONTROL STICKER UPDATE:
Mark off "50" on the Modification Control Sticker.

END OF DOCUMENT
END OF DOCUMENT

ABBOTT ADD	TECHNICAL SERVICE BULLETIN

SUBJECT:
New and Improved V-Wheels For The Matrix Carousel

TSB#: **83-049**

ORIGINATOR: **David Otterman**
APPROVED: **Mark Slater 10/2/95**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **4-64293-01**	Upgrade Time: **0.50 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **05-OCT-95**	Validation Time: **1.00 Hr.**
Instruments Requiring Modification: **Serial Number ≤ 4602**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.50 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
International and USA

II. PURPOSE:
The purpose of this TSB is to notify the field of the replacement of V-Wheels on the Matrix Carousel. The current nylon V-wheels (Black) will be replaced with a harder, polycarbonate, V-wheels (white). The new V-wheels are more durable and do not wear as rapidly as the old nylon wheels.

Due to the availability of parts, only the V-wheels in the matrix carousel area will be replaced for this TSB. When replacing any V-wheel on any carousel it is imperative that the entire set (3) be replaced along with it. Do not mix white V-wheels with the black V-wheels.

III. ADMINISTRATIVE NOTES:
USA: This TSB should be closed out in Field Watch as follows:
SC = 03 TC = 49 RC = 93

INTERNATIONAL: The International Service Manager should send forecast requirements to their responsible logistic organization based on the number of instruments effected in your area. Please reference TSB 83-049 on forecast requirements.

IV. SPECIAL TOOLS:
Offset Screwdriver

V. PARTS:

REPLACED PARTS:
Discard V-wheels that have been removed.

COMPATIBILITY:
NOTE: C/N 4-38193-01 will no longer be available after October 19, 1995.

VI. PROCEDURE:

MODIFICATION STEPS:

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

1. Perform a routine shutdown of the Instrument (F2) and turn power off.
2. Remove the left panel that covers the matrix carousel.
3. Remove the air director, then the matrix carousel.
4. Using your Offset screwdriver remove the black V-wheels (and shoulder screws) that support the matrix carousel.
5. Install the new, white V-wheels (new V-wheels will include bearings and shoulder screw).
6. Reinstall matrix carousel, air director and left panel.
7. Perform Total Service Call.

NOTE: Using a cotton swab, clean the matrix carousel home sensor.

CHECKOUT:

1. Matrix Cell load Sequence (VP-43)
2. MEIA Station Cal. (VP-38)
3. MEIA Optics Init. (VP-40)

MODIFICATION CONTROL STICKER UPDATE:
Mark Off number 49 on the Instrument Control Mod Sticker.

END OF DOCUMENT
END OF DOCUMENT

ABBOTT ADD	TECHNICAL SERVICE BULLETIN

SUBJECT:
270 Mb Hard Drive LED Failures

TSB#: **83-047**

ORIGINATOR: **Jane Hughes**
APPROVED: **Mark Slater 10/6/95**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **4-37339-01**	Upgrade Time: **0.25 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **06-OCT-95**	Validation Time: **0.25 Hr.**
Instruments Requiring Modification: **Serial Numbers 3732- 4148**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **0.50 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
To permit proper operation of the hard disk drive LED by replacing the incorrectly wired cable/LED assembly on the 270 Mb hard drives.

III. ADMINISTRATIVE NOTES:

USA: This TSB should be closed out in FieldWatch as follows:
SC = 03 TC = 47 RC = 93
Parts will be shipped per IRL.

International: The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-047 on forecast requirements.

EUROPE: Completion of this TSB will be tracked. Country Customer Service Managers are to report total number of instruments which have to be upgraded with this TSB within 30 days and report monthly number of TSB's completed this month as well as total instruments upgraded to date. Please include this data in your monthly "Upgrade Status Report" and sent to J.P. Bernou in Delkenheim at the end of each month.

IV. SPECIAL TOOLS:
NONE

V. PARTS:

REPLACED PARTS:
Old hard disk drive LED/Cable Assemblies should be discarded.

COMPATIBILITY:
Cable/LED assy is specific to the hard drive.

VI. PROCEDURE:

MODIFICATION STEPS:

1. Determine Hard Drive LED operation by accessing the message history log. The LED should come on while the message log is compiling. If the LED does **not** illuminate, perform the following replacement.
2. Perform **SHUTDOWN** and turn power to the instrument off.
3. Remove access cover to disk drive assembly.
4. Disconnect LED cable from where it plugs into hard drive.
5. Snap LED out by pushing LED forward, then sliding it out of the notch in the bracket.
6. Plug new cable into hard drive and snap LED into bracket.

CHECKOUT:

1. Watch LED during instrument power-on. Verify that LED lights. This should occur following the tone at number 25 during the power on sequence and cycles until 38.
2. Perform total call.

MODIFICATION CONTROL STICKER UPDATE:
Mark TSB Sticker for TSB 47.

END OF DOCUMENT
END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
New Process Carousel

TSB#: **83-046**

ORIGINATOR: **Emile Diou**
APPROVED: **Mark Slater 9/11/95**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **4-37071-02**	Upgrade Time: **0.25 Hr.**
○ Immediate ○ Next Service Call ● Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **11-SEP-95**	Validation Time: **1.00 Hr.**
Instruments Requiring Modification: **S/N 4146 & Below**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.25 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:

International and USA

II. PURPOSE:

The purpose of this TSB is to notify the field of a change to the process carousel. The changes made may reduce splashing of reagents out of the RVs during normal movement. The changes consist of adding a small bump to one side of the guide in the carousel that holds the RVs. These bumps add resistance to the RV as it is being inserted into the carousel and constrain it during normal instrument operation. A small recess has also been added directly above the bump on both sides of the guide to allow the RV to flex as it contacts the bump of the guide, reducing the insertion force as seen from the transfer carousel.

This new carousel also incorporates two other changes; the probe alignment target is modified to improve fluid drainage, and the home sensor flag is secured by a screw. Replace this carousel as a Next Failure to any assay that shows evidence of splashing on the process carousel.

III. ADMINISTRATIVE NOTES:

NOTE: S/N 4146 - 4434 have the new process carousel installed, but the TSB modification sticker has not been marked. Mark 46 on the Modification Control Sticker for these instruments on the next site visit. The Modification Control Sticker for S/N 4434 and above are correctly marked.

USA: This TSB should be closed out in FieldWatch as follows:
SC = 03 TC = 46 RC = 93

International: The International Service Manager should send forecast requirements to their responsible logistic organization based on the number of instruments effected in your area. Please reference TSB 83-046 on forecast requirements.

IV. SPECIAL TOOLS:

N/A

V. PARTS:

REPLACED PARTS:
Discard the old process carousel.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

COMPATIBILITY:

NOTE: C/N 4-37071-01 will no longer be available.

VI. PROCEDURE:

MODIFICATION STEPS:

REMOVAL

1. Open Top Cover. (PL - A2.9)
2. Remove Process Crsl Cover. (PL - A1.1)
   a. Unscrew 2 captive screws holding cover to process plate.
   b. Remove cover.
3. Remove Process Crsl. (PL - A1.15)
   a. Lift up Crsl while pressing against motor lever to release tension.
   b. Remove Crsl.

REPLACEMENT

Install in reverse order.

CHECKOUT:

VERIFICATION

1. Perform the following:
   a. Startup Procedure [F3]. (VP - 3)
   b. Process Probe Cal. (VP - 22)
   c. FPIA Verification. (VP - 34)
   d. Fluidics Check. (VP - 49)
   e. RV Load Sequence. (VP - 42)
2. Perform total service call.

MODIFICATION CONTROL STICKER UPDATE:

Mark 46 on Mod Control Sticker.

END OF DOCUMENT
END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Diluent Supply Tubing and Tubing Connectors

TSB#: **83-045A**

ORIGINATOR: **Harry Durstine**
APPROVED: **Mark Slater 9/1/95**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION: ○ Immediate ● Next Service Call ○ Next Failure ○ Optional Instruments Requiring Modification: **Serial Number < 4185**	TSB Part/Kit #: **79616-101** TSB Effectivity/ Part(s) Availability: **07-AUG-95** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **2.0 Hrs.** Validation Time: **1.0 Hr.** Total Mod. Time: **3.0 Hrs.** ****NOTE** The instrument must be at TSB Level 38 prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
The purpose of this TSB is to replace all system tubing in order to incorporate:

- New ferrules having a larger sealing surface (which eliminates the chance of crushing a ferrule).
- The new ferrules have a "hard" stop which allows for a more consistent seal.
- The polyurethane tubing from the Solution #4 weight to the diluent pump inlet ports is less porous.
- Inlet ports to the diluent pump no longer require Teflon tape.

All system tubing is replaced as part of this modification. Extra sample probe link tubing and process link tubing are provided to replace the customer's spares. The system should be at TSB level 38 (2.00/2.05 software) prior to performing this TSB because the customer should be using Actril (Tubing Decontamination Solution) and not Minncare™.

III. ADMINISTRATIVE NOTES:

U.S.A. This TSB should be closed in FieldWatch SC = 03 TC = 45 RC = 93. Parts will be shipped per IRL.

International: The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-045 on forecast requirements.

Europe: Completion of this TSB will be tracked. Country Service Managers are to report on a monthly basis the total number of TSBs to be performed, number of upgrades completed this month and total number upgraded to date. Please send this information to J.P. Bernou in Delkenheim by end of each month.

IV. SPECIAL TOOLS:
N/A

V. PARTS:

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

VI. PROCEDURE:

MODIFICATION STEPS:

NOTE: When not working in the Process Area, be sure to close the process lid to avoid a one hour warmup.

I. System Preparation

1. Print the INVENTORY screen. From the main menu, press/select INVENTORY. Press ALT-PRINT.
2. Remove reagent packs from system. Press F5-SCAN PACKS.
3. Remove the MUP (#1) straw from the MUP bulk solution. Leave the MUP solution on the scale assembly.
4. Remove the Tabwash (#3) straw from the Tabwash bulk solution. Use the Tabwash solution to hold down the Tabwash scale.
5. Unscrew the cap from the Line Diluent (#4) container. Remove the line and place the weight on a paper towel. Leave the Solution #4 container on the scale assembly.
6. Ensure supply tubing is <u>not</u> in any bulk solution. From the main screen, press MAINTENANCE/PRIME AND FLUSH. Flush each line twice (with air) by typing a "2" under Repetitions next to:

Bulk Solution 4 (Sampling Syringe) Flush	> 2
Bulk Solution 4 (Processing Syringe) Flush	> 2
Bulk Solution 1 Flush	> 2
Bulk Solution 3 Flush	> 2

7. Press F2-PERFORM MAINT.

II. Tubing Replacement

NOTE: If an old style ferrule gets stuck in a port, use a small screwdriver or small pointed object to get it out. Push between the ferrule and fitting toward the center of the ferrule. This will damage the ferrule for easy removal without damaging the threads on the connector.

A. Process Diluent Delivery

1. Replace the process probe link tubing (38621-103) from the process probe to the process syringe. Ensure that the tubing is installed such that the dots align with the dots on the side of the MEIA Optics PCB cover. (Reference OPs Manual Vol 2 of 2, Section 9 Component Replacement.)
2. Replace the 18" tubing from the process syringe to the diluent heater (79619-101).
3. Replace the 40" tubing from the diluent heater to the output of the accumulator tubing (79620-101). The output of the accumulator tubing is along the left wall inside the Bulk Solution Supply Center.

B. Sample Diluent Delivery

1. Replace the sample probe link tubing (38622-103) from the sample probe to the sample syringe. Ensure that the tubing is installed such that the dots align with the dots on the side of the Sample Syringe bracket.
2. Replace the 12" tubing from the sample syringe to the output of the accumulator tubing (79618-101). The output of the accumulator tubing is along the left wall inside the Bulk Solution Supply Center.
3. CLOSE THE PROCESS LID.

C. MUP (#1) Delivery

1. Remove the small volume scale assembly.
2. Remove the straw on the MUP scale. Discard the white connector and the ferrule. Do not cut/shorten the straw. Install a new connector and new style ferrule as shown in Figure 1.
3. Reinstall the straw on the MUP scale.
4. Replace the 40" black tubing (79623-101) from the top of the MUP scale to the MUP valve.
5. Remove the MUP pump from the Supply Center wall.
6. Remove the 6" tubing from the MUP valve to the MUP pump. Also remove the 70" tubing from the output side of the MUP pump to MUP (#1) heater block.

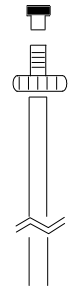


Figure 1

HELPFUL HINT: It is easier to install the ferrule/connector to the pump if, first, you use a circle "T" or valve port to seat the ferrule to the end of the tubing.

7. Use the hint above to push the ferrules into the connector. Then install new 70" tubing (79621-101) from the output (back) side of the MUP pump to the MUP (#1) heater block.
8. CLOSE THE PROCESS LID.
9. Use the hint above to push the ferrules into the connector. Then install new 6" black tubing (79622-101) from the input (front) side of the MUP pump to the valve.
10. Resecure the MUP pump to the Supply Center wall. Be sure not to crush any tubing!

D. QUAT (#2) Delivery

1. Remove the straw on the QUAT scale. Discard the white connector and the ferrule. Do not cut/shorten the straw. Install a new connector and new style ferrule as shown in Figure 1.
2. Reinstall the straw on the QUAT scale.
3. Replace the 40" tubing (79620-101) from the top of the QUAT scale to the QUAT valve.
4. Remove the QUAT pump from the Supply Center wall.
5. Remove the 6" tubing from the QUAT valve to the QUAT pump. Also remove the 70" tubing from the output side of the QUAT pump to the QUAT dispense station (next to the Feeder).

HELPFUL HINT: It is easier to install the ferrule/connector to the pump if, first, you use a circle "T" or valve port to seat the ferrule to the end of the tubing.

6. Use the hint above to push the ferrules into the connector. Then install new 70" tubing (79621-101) from the output (back) side of the QUAT pump to the QUAT dispense station.
7. CLOSE THE PROCESS LID.
8. Use the hint above to push the ferrules into the connector. Then install new 6" tubing (79617-101) from the input (front) side of the QUAT pump to the QUAT valve.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

9. Resecure the QUAT pump to the Supply Center wall. Be sure not to crush any tubing!

E. TABWASH (#3) Delivery
1. Remove the straw on the TABWASH scale. Discard the white connector and the ferrule. Do not cut/shorten the straw. Install a new connector and new style ferrule as shown in Figure 1.
2. Reinstall the straw on the TABWASH scale.
3. Replace the 40" tubing (79620-101) from the top of the TABWASH scale to the TABWASH valve.
4. Remove the TABWASH pump from the Supply Center wall.
5. Remove the 6" tubing from the TABWASH valve to the TABWASH pump. Also remove the 70" tubing from the output side of the TABWASH pump to TABWASH (#3) heater block.

HELPFUL HINT: It is easier to install the ferrule/connector to the pump if, first, you use a circle "T" or valve port to seat the ferrule to the end of the tubing.

6. Use the hint above to push the ferrules into the connector. Then install new 70" tubing (79621-101) from the output (back) side of the TABWASH pump to the TABWASH (#3) heater block.
7. CLOSE THE PROCESS LID.
8. Use the hint above to push the ferrules into the connector. Then install new 6" tubing (79617-101) from the input (front) side of the TABWASH pump to the valve.
9. Resecure the TABWASH pump to the Supply Center wall. Be sure not to crush any tubing!

F. Diluent Pumps
1. Remove the two (2) tubing clamps at each diluent pump inlet port. (4 clamps total.)
2. Remove the tubing assembly from the weight/filter to the four (4) inputs on the diluent pumps.
3. Remove the two (2) inlet barbed fittings on each diluent pump (4 fittings total.)
4. Remove the lower (sampling) diluent pump from the Supply Center wall.
5. Remove the two 6" pieces of tubing from the circle "T" fitting to the output (back) side of the sample diluent pump.

HELPFUL HINT: It is easier to install the ferrule/connector to the pump if, first, you use a circle "T" or valve port to seat the ferrule to the end of the tubing.

6. Use the hint given above and install two new 6" pieces of tubing (79617-101) from the circle "T" fitting to the output (back) side of the sample diluent pump.
7. Remove the last 6" tubing from the circle "T" fitting to the accumulator tubing.
8. Install a new 6" tubing (79617-101) from the circle "T" fitting to the accumulator tubing.
9. Before securing the lower (sampling) diluent pump to the Supply Center wall, install two (2) new inlet ports to the input (front) side of the pump. Tighten the inlet port barbed fittings "finger tight." Then use a 5/16" nut driver (or small crescent wrench) and tighten both fittings 1/8 to 1/4 turn.

IMPORTANT: Review Figure 3 before attaching any tubing to the diluent pump (front) input side. Once any of the new tubing is installed it cannot be removed. It is a very tight fit. Cutting the tubing back off makes it too short! (It may be helpful to use Figure 3 and label the tubing "upper" and "lower" before continuing.)

10. Using Figure 3, install the correct ends of the Buffer Supply tubing set to the inlet ports on the sampling pump. Hold the back of the pump while installing the tubing. Push the polyurethane tubing completely onto the inlet ports. Wetting the tubing with DI water can be helpful in installing the tubing.
11. Install a tubing tie wrap (14276-108) over the tubing at the inlet ports as shown in Figure 2. Do not use cable tie wraps on tubing. Use only the tubing tie wraps provided in the TSB kit.
12. Carefully secure the sample diluent pump to the Supply Center back wall. Be sure not to crush any tubing!
13. Remove the upper (processing) diluent pump from the Supply Center wall.
14. Remove the two 6" pieces of tubing from the circle "T" fitting to the output (back) side of the sample diluent pump.

HELPFUL HINT: It is easier to install the ferrule/connector to the pump if, first, you use a circle "T" or valve port to seat the ferrule to the end of the tubing.

15. Use the hint given above and install two new 6" pieces of tubing (79617-101) from the side

ports of the circle "T" fitting to the output (back) side of the sample diluent pump.

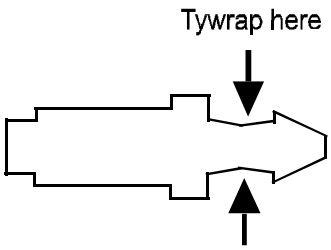


Figure 2

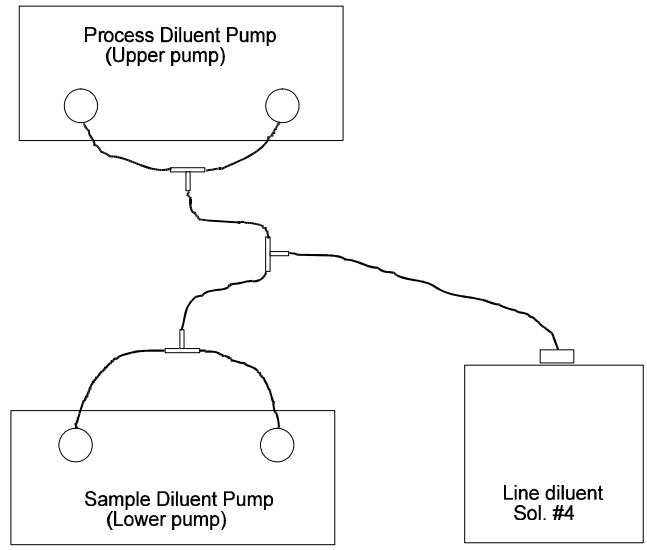


Figure 3 - Diluent Pump Inlet Tubing Routing

16. Remove the last 6" tubing from the circle "T" fitting to the accumulator tubing.
17. Install a new 6" tubing (79617-101) from the circle "T" fitting to the accumulator tubing.
18. Before securing the upper (processing) diluent pump to the Supply Center wall, install two (2) new inlet ports to the input (front) side of the pump. Tighten the inlet port barbed fittings "finger tight." Then use a 5/16" nut driver (or small crescent wrench) and tighten both fittings 1/8 to 1/4 turn.
19. Using Figure 3, install the correct ends of the Buffer Supply tubing set to the inlet ports on the processing pump. Hold the back of the pump head while installing the tubing. Push the polyurethane tubing completely onto the inlet ports. Wetting the tubing with DI water can be helpful in installing the tubing.
20. Install a tubing tie wrap (14276-108) over the tubing at the inlet ports as shown in Figure 2. Do not use cable tie wraps on tubing. Use only the tubing tie wraps provided in the TSB kit.
21. Carefully secure the process diluent pump to the Supply Center back wall. Be sure not to crush any tubing!
22. Install small scale assembly. Ensure no tubing or wiring gets pinched.
23. Install bulk solutions.
24. Press INVENTORY on the main screen. Using the inventory screen previously printed, edit the bulk solution volumes to match the printout since the system counted two air flushes as using bulk solutions.

CHECKOUT:

1. Perform two (2) flushes (VP-47) for Solutions 1, 3 and 4. Check for leaks at all connections while flushing. Listen for unusual pump noises that could indicate crimped tubing. (Troubleshoot using Service Manual.)
2. Perform a Fluidics Check. (VP-49)
3. After completion of this TSB, perform a Total Service Call. Be sure to run controls for at least one FPIA and one MEIA assay.

Customer Spare Probe Link Tubing

1. Each TSB kit has one Sampling Probe Link tubing (38622-103) and one Process Probe Link tubing (38621-103) to replace the customers spare stock. Probe link tubing having the old white ferrules should be removed from the customer account so a system downgrade does not occur the next time the customer uses their spare probe link tubing.

MODIFICATION CONTROL STICKER UPDATE:

1. Mark off "45" on the Modification Control Sticker

END OF DOCUMENT
END OF DOCUMENT

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
2.10 SOFTWARE

TSB#: **83-044**

ORIGINATOR: **JACK HALL**
APPROVED: **Dave Otterman for Mark Slater 6/19/95**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-10739-003**

IMPLEMENTATION: ○ Immediate ○ Next Service Call ○ Next Failure ● Optional Instruments Requiring Modification: **n/a**	TSB Part/Kit #: **LN 03C73-01** TSB Effectivity/ Part(s) Availibility: **19-JUN-95** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **3.0 Hrs.** Validation Time: **0.5 Hrs.** Total Mod. Time: **3.5 Hrs.** ****NOTE** The instrument must be at TSB Level 38A prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
The purpose of this TSB is to instruct the field on how to install version 2.10 software. Revision 2.10 software allows the customer to track the number of tests by assay that have been completed. On existing customer accounts the customer will install version 2.10 software on their AxSYM® system. On new installations the FSR will install the version 2.10 software.

Note: If the current system software is 2.05/2.06 the System Language, General Configuration #13, must be set to "English" prior to installing version 2.10. Version 2.10 software does not support any language other than English.

III. ADMINISTRATIVE NOTES:
International: This TSB is being released in the U.S. only

USA: This software version will be distributed by Contract Marketing. The software will be sent directly to the customer site.

IV. SPECIAL TOOLS:
NONE

V. PARTS:
The 2.10 Software Upgrade Kit (LN03C73-01) contains:
> AxSYM® System Software Version 2.10 Addendum.
> AxSYM System Software Version 2.10 Floptical Diskette
> AxSYM System Software Version 2.10 Customer Letter

VI. INSTALLATION:
Note: The instrument must be at TSB level 38A before performing this procedure.

1. Select CONFIGURATION from the main menu.
2. Select INSTALLATION from the configuration screen.
3. Select F6 - INSTALL VERSION .
4. At the system prompt, insert the new System Version 2.10 floptical diskette into the drive.
5. Select OK.
   During the bootup process the Abbott "A" logo is displayed for approximately five minutes. When bootup is complete, the Language Installation screen is displayed.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

6. Select "English"
7. Select PERFORM SOFTWARE INSTALLATION ONLY.
   Caution: Do not select the option FORMAT HARD-DRIVE PRIOR TO INSTALLING SOFTWARE.
8. Select OK. The system will display the In Progress pop-up screen as it loads the new software. This will take approximately 30 minutes.
9. At the system prompt remove the floptical diskette.
10. Select OK. After approximately 30 seconds the main menu will be displayed.
11. Perform a System Backup.

NOTE: Marketing is tracking the test counts at some accounts. If the CPU board is to be replaced you must copy the test counts to a diskette and give to the customer before changing the board.

To copy assay count information to a disk:

1. Select STORED RESULTS
2. Select RUN INFORMATION
3. Select F6 - ASSAY COUNTS
4. Select F2 - COPY TO DISK
5. Insert a 3.5 inch 1.44 MB floppy disk into the disk drive.
6. Select OK.

V. VALIDATION:

1. Select STORED RESULTS from the Main Menu.
2. Select RUN INFORMATION from the Stored Results screen.
3. Select F6 - ASSAY COUNTS from the Run Information screen.
   The Assay Counts Screen is displayed.
   NOTE: The Assay Counts can only be reset to "0" by an FSR.

MODIFICATION CONTROL STICKER UPDATE:

Mark off TSB 44 on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Software Version 2.33

TSB#: **83-043A**

ORIGINATOR: **JIM RYDBERG**
APPROVED: **Christie McCain 2/26/96**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **LN 06C72-01**	Upgrade Time: **1.5 Hrs.**
○ Immediate ○ Next Service Call ○ Next Failure ● Optional	TSB Effectivity/ Part(s) Availability: **26-FEB-96**	Validation Time: **0.5 Hrs.**
Instruments Requiring Modification: **Limited release to customers with ROBOTICS applications.**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **2.0 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:

USA: Domestic
Worldwide: (Canada Only)

II. PURPOSE:

The purpose of this TSB is to inform the field of the release of Software Version 2.33, for Domestic (USA) use. This software is specifically designed for customers who have ROBOTICS applications that are interfaced with the AxSYM® Instrument. The software is intended to integrate an AxSYM instrument into an automated laboratory environment.

NOTE: This upgrade must be performed by an FSR/FSE.

III. ADMINISTRATIVE NOTES:

USA: This TSB is limited to customer designated by US AxSYM Marketing.
International: Previously released specifically to MDS - Canada Only. There are no changes to this application.

NOTE: Included in this TSB as an attachment, are a list of error code cause and effects, associated with this unique software. Further information can be obtained from the Customer Software Addendum 2.33.

IV. SPECIAL TOOLS:

None Required

V. PARTS:

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

VI. PROCEDURE:

MODIFICATION STEPS:

1. From the Main menu, Press F6 and Log onto the system as FSE.
2. Select CONFIGURATION/GENERAL menu.
3. Press [Alt] and [Print] simultaneously to print the current configuration screen.
4. Use the Page Down arrow to scroll and copy the remaining configuration screens.
5. Set the printouts aside to use after software installation is complete.
6. Select CONFIGURATION/PORTS menu.
7. Press [Alt] and [Print] simultaneously to print the current port configuration screen.
8. Set the printouts aside to use after software installation is complete.
9. Return to the main menu.
10. Insert the System Software Version 2.33 diskette (LN06C72-01) into the floptical drive.
11. Select CONFIGURATION/INSTALLATION menu.
12. Select [F6] INSTALL VERSION.
13. Select OK.
14. Select ENGLISH.
15. Select PERFORM SOFTWARE INSTALLATION ONLY. Note: Do Not Format the hard drive.
16. Select OK.
17. At the completion of software installation, remove the diskette from the floptical drive and select OK.
18. Select CONFIGURATION/GENERAL menu.
19. Edit the default configuration items that have changed to default values during software installation.

NOTE: Some items may be located at different locations on the configuration screen.

CHECKOUT:

1. After completion of this TSB, perform ISA 83-048A, and then a Total Service Call. Be sure to run controls for at least one FPIA and one MEIA assay.

NOTE: If the instrument is downgraded or upgraded to a different version of software, ISA 48A must be performed.

MODIFICATION CONTROL STICKER UPDATE:

1. Mark off "**43**" on the Modification Control Sticker.

ERROR CODE ADDENDUM

The following list contains error codes that will be sent to the **LOW LEVEL** message history log and the CLI Host:

Unable to Execute, System Busy: The CLI Host sent RV_TRASH command to the AxSYM® Instrument when it was not in the READY state.
CLI Host should wait for AxSYM instrument to be in READY state and re-send the command.

Location already empty: The CLI Host sent UNLOADED_SAMPLE_SEGMENT n command to indicate that segment n has been unloaded. The AxSYM instruments segment map already shows that segment n is empty. This may indicate that the CLI Host and the AxSYM have become out of sync.

Position already occupied: The CLI Host sent LOADED_SAMPLE_SEGMENT n or LOADED_RV_LOCATION n command to indicate that n has been loaded. The AxSYM instruments segment or RV map show that n is already occupied. This may indicate that the CLI Host and the AxSYM have become out of sync.

Timeout for pause command exceeded: The CLI Host sent PAUSE_SAMPLING_CENTER command and the AxSYM tried to PAUSE but timed-out after four minutes waiting for the system to enter the PAUSED state. CLI Host should not signal the operator to manually interact with the AxSYM Sampling Center as it is still RUNNING.

RV Trash command failed: The CLI Host sent RV_TRASH n command and the AxSYM® instrument tried to run RV n into the trash but had a robotics problem and failed. The AxSYM does not mark its RV map location n as transferred. This could indicate an RV unload problem.

Sample Center motor homing failed: The CLI Host sent HOME_SAMPLE_CENTER command and the AxSYM tried to home the sampling center but failed with a robotics problem. This could indicate a sampling center robotics problem.

Mechanism failure has occurred: The CLI Host sent REMOVE_RUN command and the AxSYM had experienced a previous robotics problem for a vital mechanism which had not been corrected, homed or cleared, the AxSYM was probably still in a STOPPED state.

Error detected during the scan of the reagents: The CLI Host sent REMOTE_RUN SCAN command and the AxSYM encountered a problem trying to open one of the databases or scanning the reagent packs like RGNT_PACK_BARCODE_FAIL or RGNT_CRSL_MOVE_FAILED. Check reagent pack status, barcode and scanning robotics.

Timeout for run command exceeded: The CLI Host sent REMOTE_RUN command and the AxSYM tried to enter the RUNNING state but timed-out after 200 seconds waiting for the system to start RUNNING.

Startup command failed: The CLI Host sent STARTUP command and the AxSYM tried to perform the STARTUP operation but failed.

8242 Host Message Dispatcher Task unable to send message to Host: AxSYM® instrument tried to send a manufacturer record type message to the Host, but the Host did not respond with the required receiver acknowledge code (RECEIVER_ACK). This could be a Host interface problem.

8243 Host Message Dispatcher Task, LIS does not respond, communication error: The AxSYM tried to send a manufacturer record type to the Host but was unable to establish an ASTM link with the Host. This could be a Host interface problem.

8244 Host Message Dispatcher Task, LIS port busy: The AxSYM tried to send a manufacturer record type message to the Host, but was unable to acquire access to the Host port (unable to acquire host port semaphore). It is possible that the AxSYM test completion task is holding up the Host port and/or the Host is not responding in a timely fashion. This could be a Host interface problem.

Matrix Cell inventory running low: This message is the manufacturer record inventory threshold warning version of the normal, on-line error 2100 message. This message is sent to the host when the Matrix Cell inventory falls to 20% capacity. Add Matrix Cells and update inventory.

Bulk reagent 1 inventory running low: Bulk reagent 1 inventory has fallen to 20% capacity. Replace reagent 1 and update reagent inventory.

Bulk reagent 2 inventory running low: Bulk reagent 2 inventory has fallen to 20% capacity. Replace reagent 2 and update reagent inventory.

Bulk reagent 3 inventory running low: Bulk reagent 3 inventory has fallen to 20% capacity. Replace reagent 3 and update reagent inventory.

Bulk reagent 4 inventory running low: Bulk reagent 4 inventory has fallen to 20% capacity. Replace reagent 4 and update reagent inventory.

Liquid waste inventory becoming full: Liquid waste inventory has only 20% capacity remaining. Empty the liquid waste and update liquid inventory.

Solid waste inventory becoming filled up: Solid waste inventory has only 20% capacity remaining. Empty the solid waste and update waste inventory.

END OF DOCUMENT

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
2.06 System Software

TSB#: **83-042A**

ORIGINATOR: **Harry Durstine**
APPROVED: **Mark Slater 7/20/95**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-10690**

IMPLEMENTATION:	TSB Part/Kit #: **LN 03C55-01**	Upgrade Time: **0.25 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availibility: **10-JUL-95**	Validation Time: **None**
	TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)	Total Mod. Time: **0.25 Hr.**
Instruments Requiring Modification: **Serial Number ≤ 3852**	○ YES ● NO	****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
Three issues have been identified with AxSYM® system software Version 2.05 when the system language is configured other than English:

1. Under the Control Configuration Screen, Minimum Value, Maximum Value, Control Mean and Expected SD do not allow correct entry of values due to a limitation in field length.
2. In the Levey-Jennings QC screen, the Entered SD does not allow correct entry of values due to a limitation in field length. Under the Control Configuration Screen, Minimum Value, Maximum Value, Control Mean and Expected SD do not allow correct entry of values due to a limitation in field length.
3. The Calibration Orders Screen (German only) does not display the first digit in the "Sample Cup Min Vol" field due to a limitation in the field length.
4. CSC logon has been corrected in Spanish and German.

v2.05	**v2.06**
STA	CSC
KDD	CSC

If a customer configured while using English and then changed to another language, the screen issues were not seen. Software version 2.06 corrects these issues. There are two different disks associated with this TSB.

An upgrade disk (part of LN 03C55-01) allows a system at 2.05 to quickly be upgraded to 2.06. The upgrade disk should only be used if the system is currently at Software Version 2.05. Do not leave the upgrade disk at the customer site.

A system software disk, also part of LN 03C55-01, upgrades a system from 1.20/1.25. This disk is a complete system disk and is used if the customer has not upgraded to 2.05 yet.

Regardless of upgrade method, the System Software disk should be left with the customer for use should a hard drive format become necessary due to a problem and a backup disk is unavailable.

U.S.A.: Systems configured in English do NOT need to upgrade to 2.06 if already at Software Version 2.00/2.05.

International: Systems configured in English do NOT need to upgrade to 2.06 if already at Software Version 2.00/2.05.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

Europe: All Customers must be upgraded to Software Version 2.06

Follow the flow diagram (Figure 1) to determine if an upgrade is required and if so, which upgrade is required.

III. ADMINISTRATIVE NOTES:

U.S.A.: This upgrade should NOT be applicable to the U.S. unless customers are configured in a non-English language.

International: The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-042 on forecast requirements.

EUROPE : Completion of this TSB will be tracked. Country Service Managers are to report on a monthly basis the total number of TSB's to be performed, number of upgrades completed this month, and total systems upgraded to date. Please send this information to J.P. Bernou in Delkenheim by the end of each month.

IV. PARTS:

List Number	Description
LN 03C55-01	2.06 System Software Upgrade Kit

V. PROCEDURE:

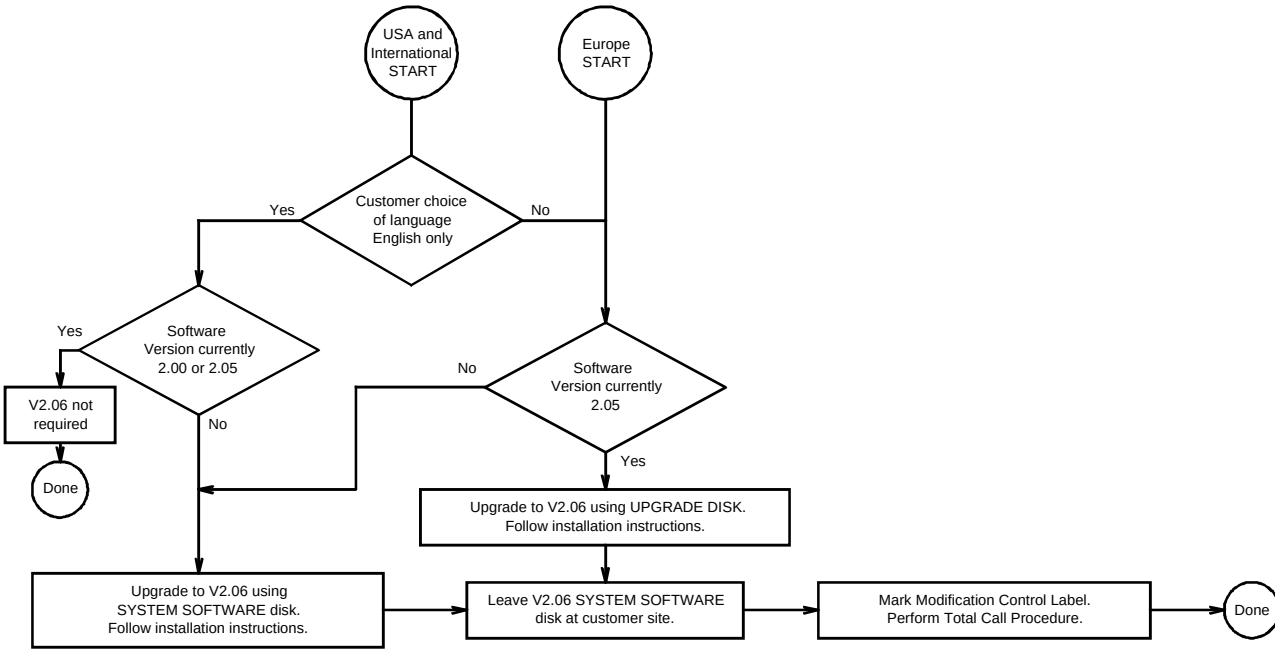


Figure 1
Upgrade Determination Flowchart

Modification Steps

1. Use the flow chart [Figure 1] on the previous page to determine which upgrade (if any) is required. (If the flowchart indicates that this TSB is not required, no further actions are necessary.)
2. Follow the appropriate instructions included with the upgrade disk being used.

   NOTE: After upgrading, be sure to allow the system to complete its warmup. Do not configure in another language until the system status changes to READY. Otherwise a one hour warmup will be required.

3. After the upgrade has been completed, leave the V2.06 SYSTEM SOFTWARE disk with the customer along with the Customer Letter provided with the Installation instructions.

Checkout

1. After completion of this TSB, perform a Total Service Call. Be sure to run controls for at least one FPIA and one MEIA assay.

Modification Control Sticker Update

1. Mark off "42" on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Upgrade for the Caged Syringes

TSB#: **83-041B**

ORIGINATOR: **Emile Diou**
APPROVED: **Mark Slater 8/14/95**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-3034**

IMPLEMENTATION: ○ Immediate ● Next Service Call ○ Next Failure ○ Optional Instruments Requiring Modification: **See Below for S/N List**	TSB Part/Kit #: **65086-101** TSB Effectivity/ Part(s) Availibility: **30-MAY-95** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **0.5 Hr.** Validation Time: **1.0 Hr.** Total Mod. Time: **1.5 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

THIS TSB SUPERSEDES TSB 83-041A. REMOVE TSB 83-041A AND REPLACE WITH 83-041B.

The only change to this TSB is the **SERIAL NUMBERS REQUIRING MODIFICATION**. The text remained the same.

THE SERIAL NUMBERS REQUIRING MODIFICATION ARE AS FOLLOWS:
2716 - 2929, 2933, 2935, 2936, 2938 - 2940, 2945, 2949, 2958.

I. DISTRIBUTION:
International and USA

II. PURPOSE:
The purpose of this TSB is to notify the field that a specific style of syringes have the potential to crack and leak in the syringe head. The serial numbers listed were released from the factory with this style syringe. This syringe includes several plastic parts and a metal cage that covers the motor and the PCB. (Refer to Figure 1.) The cause of the cracks is related to the plastic parts used to assemble these syringes. The plastic parts flex during a normal flush cycle. This flexing causes the syringe piston to hit the bottom of the syringe body which has the potential to result in cracks and leaks.

All syringes manufactured from the effectivity date of this TSB will have an amber colored syringe body. The assembly will not have the cage covering the motor and the PCB. This color difference is due to a new material used to improve moldability and eliminate cracks in the syringe body. This new material has been tested and is compatible with all solutions used on the AxSYM®. The TSB upgrade kit will include 2 syringe assemblies.

III. ADMINISTRATIVE NOTES:
USA: This TSB should be closed out in Field Watch as follows:
SC=03 TC=41 RC=93
Parts will be shipped per IRL.

INTERNATIONAL: The International Service Manager should send forecast requirements to their responsible logistic organization based on the number of instruments effected in your area. Please reference TSB 83-041A on forecast requirements.

EUROPE: Completion of this TSB will be tracked. Country Service Managers are to report on a monthly basis the total number of TSB's to be done, number completed this month, and total upgraded to date. Please send this information to J.P. Bernou in Delkenheim by the end of each month.

IV. PARTS DESCRIPTION:

Part Description	Kit Part Number	Quantity
TSB 041 Syringe Upgrade Kit	65086-101	1

NOTE: The Syringe Upgrade includes 2 syringe assemblies.

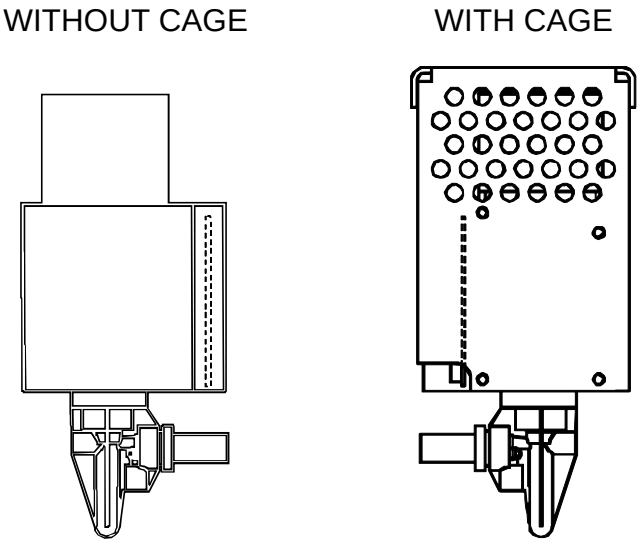


Figure 1

V. PROCEDURE:

From MAIN menu: Perform Shutdown [F2]

Sampling Syringe

1. Open Sample Syringe Door.
2. Remove Sample Syringe.
   a. Disconnect sample syringe cable (J1 (W85))
   b. Slide assembly up and pull away from mounting bracket.
   c. Remove 2 tubing connections.
   d. Remove the syringe assembly.
3. Install new syringe in reverse order.
4. Ensure all tubing and valve connections are properly seated and tight.
5. Route tubing as shown in Figure 2. Replace tubing that is crimped or kinked.

Process Syringe

1. Open Top Cover
2. Remove Process Syringe.
   a. Disconnect sample syringe cable (J1 (W17))
   b. Slide assembly up and pull away from mounting bracket.
   c. Remove 2 tubing connections.
   d. Remove the syringe assembly.
3. Install new syringe in reverse order.
4. Ensure all tubing and valve connections are properly seated and tight.
5. Route tubing as shown in Figure 2. Replace tubing that is crimped or kinked.

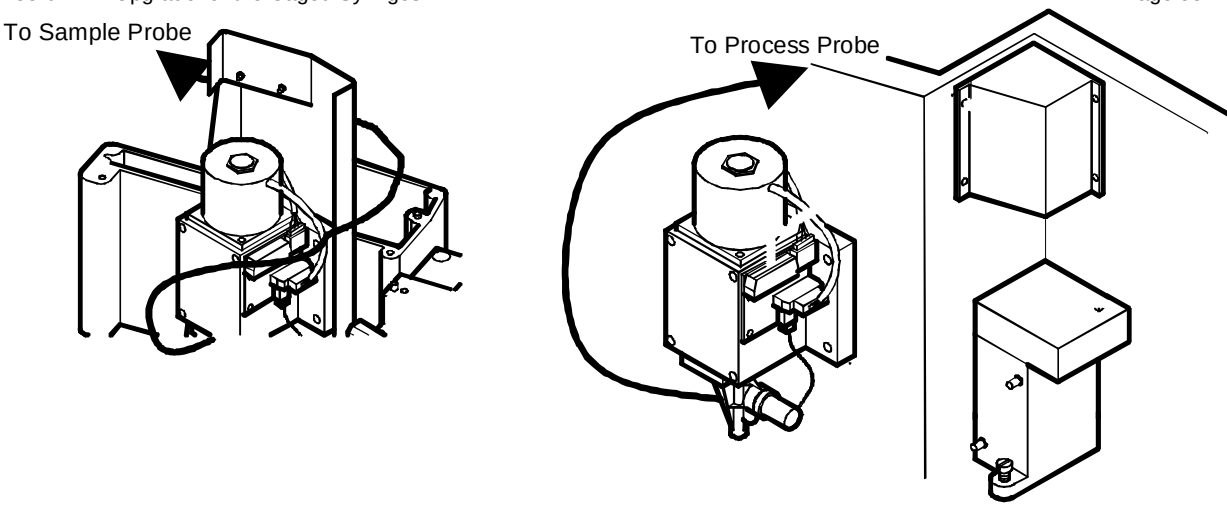


Figure 2

Verification

1. Perform the following:
2. a. Startup Procedure [F3]. (VP - 3)
   b. Flush Solutions. (VP - 47)
   c. Sample Probe Cal. (VP - 25)
   d. Process Probe Cal. (VP - 22)
   e. LLS Test. (VP - 41)
      - Sample RV Test [F3]
      - Process RV Test [F6]
   f. Fluidics Check. (VP - 49)
3. Perform Total Service Call.
4. Ensure the operator understands that all levels of controls should be run to validate active calibration curves prior to reporting patient samples.

Disposition

1. Discard caged syringe.
2. Mark the modification control sticker.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
MODIFIED AIR DEFLECTOR

TSB#: **83-040**

ORIGINATOR: **DAVID OTTERMAN**
APPROVED: **Mark Slater 4/20/95**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-10622**

IMPLEMENTATION: ○ Immediate ● Next Service Call ○ Next Failure ○ Optional Instruments Requiring Modification: **Serial Numbers 300 - 3478**	TSB Part/Kit #: **4-38041-02** TSB Effectivity/ Part(s) Availibility: **8-MAY-95** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **0.5 Hr.** Validation Time: **1.5 Hrs.** Total Mod. Time: **2.0 Hrs.** ****NOTE** The instrument must be at TSB Level 37 prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
The purpose of this TSB is to reduce matrix cell jams resulting in error code 5020 (Motor Step Loss, matrix cell ejector, processing center). The problem occurs when the matrix cell becomes caught between the waste chute and the air deflector. The next ejected matrix cell is jammed on top of the caught cell and is not allowed to travel down the waste chute into the solid waste container. The modified air deflector will minimize the chance of the matrix cell getting caught between the waste chute and the air deflector. This is accomplished by modifying the hole diameter where the matrix cell falls through.

III. ADMINISTRATIVE NOTES:
U.S.A.: This TSB should be closed out in FieldWatch as SC=03 TC=40 RC=93
Parts will be shipped per IRL

International: The International Service Manager should send forecast requirements to their responsible logistic organization based on the number of instruments affected in your area. Please reference TSB 83-040 on forecast requirements.

IV. PART DESCRIPTION:

Part Description	Part Number	Quantity
Inside Air Deflector	4-38041-02	1

V. PROCEDURE:
MODIFICATION STEPS:

1. From the MAIN Menu perform a shutdown (F2). When instructed turn the AC power off.
2. Remove the Matrix Carousel Cover.
3. Pull the removable air deflector out.
4. Rotate Carousel until the red dot on the Carousel is facing out.
5. Remove the Matrix Carousel.
6. Remove the inside air deflector - 2 screws (refer to Fig 1).
7. Install the new air deflector in reverse order.

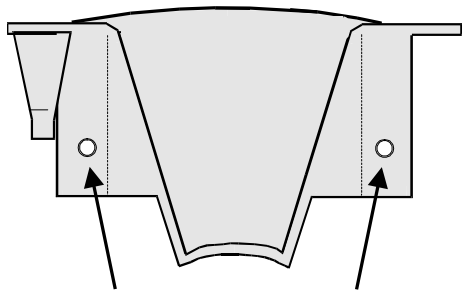


FIG 1

VERIFICATION:

The VP's identified below are in the new release Service Manual (4-64190-02).

1. VP - 38 MEIA Station Calibration
2. VP - 39 MEIA Verification
3. VP - 43 Matrix Cell Load Sequence

MODIFICATION CONTROL STICKER UPDATE:
Mark off 40 on the TSB control mod. sticker.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
PROCESS AREA LID FAN CONTROL

TSB#: **83-039**

ORIGINATOR: **Rod Defibaugh**
APPROVED: **Mark Slater 6/2/95**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-2934**

IMPLEMENTATION: ○ Immediate ○ Next Service Call ● Next Failure ○ Optional Instruments Requiring Modification: **Serial Number ≤ 3852**	TSB Part/Kit #: **4-64886-01** TSB Effectivity/ Part(s) Availibility: **19-JUN-95** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **1.0 Hr.** Validation Time: **1.5 Hrs.** Total Mod. Time: **2.5 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
THIS TSB IS NOT DUE TO A FAILURE OF A PROCESS AREA LID FAN. To determine if this TSB is required **refer** to the criteria outlined in the **Procedure Section below.**

The purpose of this TSB is to improve the temperature stability of line diluent (solution 4) dispensed by Processor Pipettor. This modification will allow Version 2.0 software (and above) to control the duty cycle of the Process Area Lid Fan increasing the temperature stability of the fluid.

The process area lid fan brings environmental air into the process area and mixes it with the heated air developed by the MEIA optic and diluent heaters. The tubing between the processing syringe and pipettor is routed under process area lid fan. As the laboratory environment changes, the temperature of the fluid dispensed by the process pipettor can change. A change of 6^{o}C (11^{o}F) within 8 hours can effect fluid.

To stabilize the fluid, this modification will add the components required to enable the software to control the duty cycle of the fan. By monitoring the temperature of the #1 (MUP) and #3 (Matrix Cell Wash) the software determines the amount of fan duty cycle needed to dissipate the heat generated.

To enable this control, this TSB will add a controller board and cables required to allow the software to use DIO board #2 bit 40 to control the fan. (Refer to Figure #2)

Temperature Calibration Screen has change with Version 2.0 software:
To enable the monitoring of the MUP and Wash heaters a change was made in the Temperature Calibration Screen. The displayed Upper Limit for Solutions 1 and 3 was changed from 37.5^{o} to 37.1^{o} C. As the heat measured at these devices reaches 37.1^{o} C the software will then use the algorithm to determine the required duty cycle of the process area lid fan.

The change to the displayed Upper Limit **does not** effect the system temperature alarm functions. As with previous version of the software, if the temperature of these devices was to vary above 37.5^{o} C an alarm message would be generated (error codes 7007 to 7011) .

III. ADMINISTRATIVE NOTES:
At this time, it is not required to add the kit or its parts to the FSE/R kit.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

USA only:
The Process Lid Fan Control Kit will be stocked in the remote depots.
This TSB should be closed out in Field Watch as follows: SC=03 TC=39 RC=93
INTERNATIONAL:
Each country must order from their distribution center the required number of kits for the systems in their area. The area distribution centers must order the resulting number of parts through World Wide Logistics Dallas.

Should you stock a 4-37321-01 General Cable Harness within your depots, you must rework these assemblies to a 4-37321-02 by adding the following cables to this assembly. After adding these cables mark the 4-37321-01 cable assembly to 4-37321-02.

Parts Description	Part Number/Catalog	Quantity
Cable, W179 Power Supply to Fan Controller	4-37302-01	1
Cable, W180 Card Cage to Fan Controller	4-37303-01	1

Records indicate that only Canada and Singapore have ordered/stock the 4-37321-01 General Cable Harness.

Time Required:

Modification Time:	1.0	Hr.
Validation Time:	1.5	Hr.
TOTAL MODIFICATION TIME:	2.5	Hr.

IV. TOOLS REQUIRED:

#1 Phillips screwdriver
#2 Phillips screwdriver

V. PARTS:

Parts Description	Part Number/Catalog	Quantity
Process Lid Fan Control Kit	4-64886-01	1

The kit contains the following parts

Parts Description	Part Number/Catalog	Quantity
Cable, W179 Power Supply to Fan Controller	4-37302-01	1
Cable, W180 Card Cage to Fan Controller	4-37303-01	1
Controller, Process Area Lid Fan	4-37710-01	1
Plate, Fan Controller Mounting	64773-101	1
Screw, 6-32 x 0.5" Phillips	14494-108	2
Screw, Plastite	14471-002	2
Cable Ties	14277-105	4

DOMESTIC:
Due to the simplicity and reliability of the components used in this modification, it is recommended that the above components not be added to the FSE/R kit.

INTERNATIONAL:
Due to the simplicity and reliability of these components, it is not necessary to add them to the FSE/R kit. However, it is recommended to stock them in the area depot centers.

REPLACED PARTS:
None

COMPATIBILITY:
This modification is compatible with all systems.

VI. PROCEDURE:

MODIFICATION STEPS:

DETERMINE IF THE SYSTEM REQUIRES THE INSTALLATION OF THE PROCESS AREA LID FAN CONTROL by using the following information:

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

1) Is the customer experiencing one of the following on either Phenobarbital, Theophylline or Carbamazepine:
   a) Controls out of specification?
   b) Erratic results?
   c) Calibration Curve Instability?

   If yes, continue.

   If no, this modification is not required. Complete troubleshooting as by the assay product troubleshooting guide or AxSYM® System Operations Manual.
2) Evaluate the lab environment for the following:
   a) Is lab outside the system established operating range of 17º C - 30º C (62º F to 86º F)?
   b) Is the instrument subject to the heat of direct sunlight?
   c) Does Instrument have poor ventilation? Minimum clearance is 15 cm (6") on all sides?
      NOTE: Environment air enters the process area from the front and rear of the Process Area Cover.
   d) Does the Message History log indicate that the temperature stability of a heater(s) is failing?
      If yes, correct the condition noted.
      If no, continue.
3) Does the lab temperature vary by > 6º C (11º F)?
   If yes, continue.
   If no, complete troubleshooting as by the assay product troubleshooting guide or AxSYM® System Operations Manual. If troubleshooting does not resolve the problem, continue.
4) Install the hardware and verify system performance as described below.

HARDWARE INSTALLATION PROCEDURE:

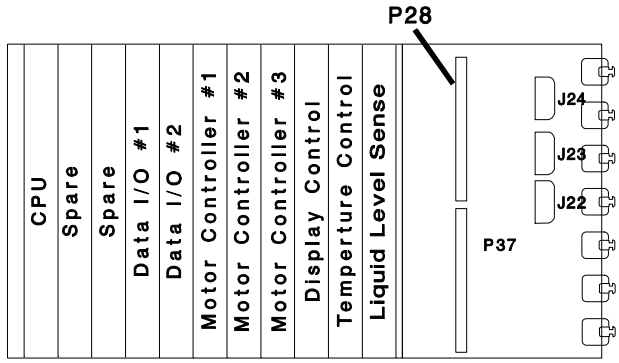
1. Perform a Shutdown and turn system power Off.
2. Remove the Rear Center Access Panel.
3. Locate the Fan Controller Board mounting area.

   Serial Number > 2485 (Does not require a controller mounting plate to be installed)
   a. Note that inside the system, above the connectors near the Power Card Cage, there are four posts extending from the metal plate that covers the underside of the process area upper base. These posts will be used in the next step to hold Process Area Lid Fan Controller Board (P/N 37710-101)

   Serial Number ≤ 2485 (Requires the installation of the controller mounting plate)
   a. From the TSB Kit locate the Fan Controller Mounting Plate (64773-101). The plate is labeled to indicate its proper orientation (Front, Back and Power Supply. This plate will be mounted to the underside of the process area upper base.
   b. Note that inside the rear access area a metal plate covers the entire underside of the process area frame. This plate is above the card cage, waste compartment and power supply.
   c. There are various screws on this plate. Near the Power Card Cage, locate the screws on the plate above the connectors between the power card cage and drain manifold. Using the Fan Controller Mounting Plate (P/N 64773-101) and its labels as a guide, find the two screws that have the same distance between them as the holes in the Fan Controller Mounting Plate.
      NOTE: There are only two screws on the plate that have the dimension required to mount the 64773 plate.
   d. Remove the two screws, and use them to mount the plate 64773-101 to the frame.
4. Hold the Process Lid Fan Controller (P/N 37710-101) board with the components facing down and connectors J1 and J3 to the left (Power Supply). Using the two posts, snap the board to the mounting plate.
5. Use the two 6-32 x 0.5" Phillips screws, (P/N 14494-108) to secure the board to the plate.
6. At the Power Supply J1, disconnect cable W46J1.
7. Carefully cut the required amount of cable ties necessary to free enough cable to route J1 to the controller board.
8. From the kit, find cable (P/N 37302-101) Power Supply to Fan Controller W179. Plug connector W179J3 in at controller board J3.
9. Plug the other end of the cable in at J1 on the Power Supply.
10. Using the cable ties (P/N 14277-105), dress the cables to the other system cables.
11. From the kit, find cable (P/N 37303-101) Card Cage to Fan Controller cable W180. Plug connector W180J2 in at controller board J2.
12. Remove the Disk Drive Access Door and the Waste Compartment Access Door. Remove the

Hard Drive Access Panel.

13. Remove the Card Cage Access Panel.
14. Locate the small metal panel to the right of the card cage. Remove the six screws.
15. From the rear of instrument, route the free end of cable W180P28 behind the card cage from the Fan Controller board to the front of the system.
16. From Card Cage Side of the system, locate P28 on the card cage. (Refer to the figure below)
17. Plug the free end of cable W180 into VME Card Cage connector P28.



VME Card Cage
(Front)

Figure 1
(Panel covering right side of card cage is removed)

18. Use cable ties (P/N 14277-105) and system cable clamps, to dress the W180 cable along the cables running behind the card cage.
19. At the rear of the VME and Power Card Cage, check that all cables are firmly plugged into their connectors.
20. Check that all tools are clear from access areas.
21. Turn on system power. The access panels will not be installed until instrument has been functionally verified.
22. If the system fails to boot to the Main Menu without error, correct the condition before continuing. Check that all card cage and power supply cables are firmly installed.

CHECKOUT:

1. From the Main Menu, log on as FSE.
2. Perform a Startup (F3).
3. Open the Process Area Cover.
4. Check that the Process Area Cover Fan is on. Check that Process Area Air Heater Fan is on. Air should be coming out from under the Process Carousel. If air is not moving, check Power Supply Connector J1 and Fan Controller Board J1 and J3. Refer to Figure 2 as required.
5. From the H: Prompt (CRTL F2) type the following:
   DIO 40 Set 1 (Note that the Process Cover Fan Turns OFF)
   DIO 40 Set 0 (Note that the Process Cover Fan Turns ON)
6. If the Fan turns off and on as indicated, the controller components are functional. If the fan did not control properly, troubleshoot by referring to the functional block diagram below.

SYSTEM VERIFICATION:

1. Perform Total Service Call.
2. Run all levels of controls for all assays listed below that are installed on the system: Carbamazepine, Phenobarbital and Theophylline.
3. Run all levels of controls for a MEIA assay.
4. Logoff as FSE. (From the Main Menu select Logon (F6) and press enter.

CONTROL LABEL UPDATE:

Mark the Modification Control Label TSB 039 complete.

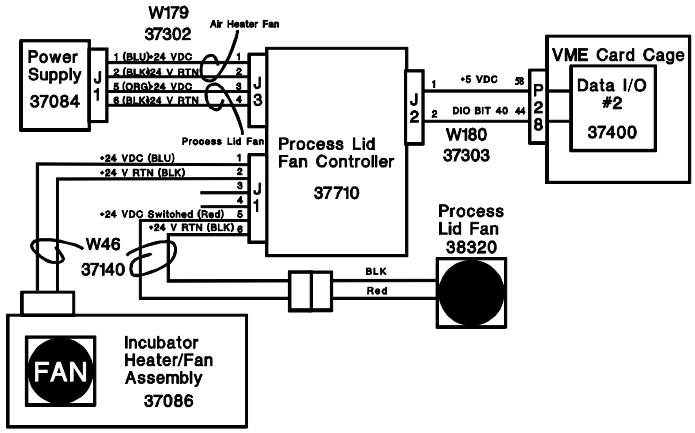


Figure 2

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Software Version 2.00/2.05 Upgrade

TSB#: **83-038A**

ORIGINATOR: **Jack Hall**
APPROVED: **Mark Slater 4/21/95**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-10,074**

IMPLEMENTATION:	TSB Part/Kit #: **See Parts List**	Upgrade Time: **1.0 Hr.**
○ Immediate ○ Next Service Call ○ Next Failure ● Optional	TSB Effectivity/ Part(s) Availibility: **10-MAR-95**	Validation Time: **1.5 Hrs.**
Instruments Requiring Modification: **Serial Number 3120 and below**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **2.5 Hrs.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

THIS TSB IS TO DEFINE THE EFFECTIVITY OF THIS TSB. THIS TSB SUPERSEDES 83-038. REMOVE TSB 83-038 AND REPLACE WITH THIS TSB.

I. DISTRIBUTION:

International and USA

II. GENERAL:

This TSB is listed as optional due to the fact that this upgrade was designed to be customer installable. Some areas may choose to utilize Abbott representatives (i.e. Sales, TMR, FSE/FSR) to perform this upgrade. This TSB lists the new features and basic installation procedures for your information. This TSB along with the enclosed Benefit and Features document and the Installation Packet provide the necessary upgrade information should you be called upon to do an upgrade.

If the TSB is installed by an Abbott FSE/FSR then the modification sticker should be checked off and the Bulk Solution Warning Label removed and discarded. If the customer or any other Abbott representative performs the upgrade, the FSE/FSR should mark off the modification sticker and remove the Bulk Solution Warning Label on the Next Service Call. All AxSYM® Systems are to be upgraded to Version 2.00/2.05. The Master Calibration Card that is included in the reagent package will not work with 1.2 software after June 1995.

NOTE: The difference between Version 2.00 software and Version 2.05 software is that 2.05 has multiple language capabilities. All systems shipped from Dallas after the Version 2.05 software release will be shipped with Version 2.05 software installed.

A. Purpose:

The following changes were made in Version 2.00/2.05. Refer to the Video and/or the Rev. 2.00/2.05 Features and Benefits pack sent under separate cover with this TSB for a detailed Explanation of changes.

1. Host Order Query
2. Sample Segment Mixing (Tube type Only)
3. Reagent Stability Tracking
4. Auto Dilution and Auto Retest
5. Extended Sample Bar Code Read Capability (TSB 83-034 must be installed for this feature)
6. Extended SID Length and SID Character Set
7. Sample Collation Release Mode
8. Stored QC Results Screen

9. Calibration Summary Screen
10. Sample Report Printing
11. Support Multiple Versions of the Same Assay On-Board
12. Link Software Versions and Assay Versions
13. Database Conversion Between Software Release
14. Cal Replicate Philosophy Change
15. Probe Alignment Procedure (refer to ISA 048)

NOTE: Once the new system software upgrade is installed, you can no longer use MINNCARE ™ due to a potential biohazard that exists with undiluted MINNCARE.

III. PARTS:

The Rev. 2.00/2.05 software diskettes will be distributed to all of the customers via "Order Entry" or "RZZ".

AxSYM® System Software Ver. 2.00 LN 08B18-01
or
AxSYM System Software Ver. 2.05 LN 08B18-25
or
AxSYM System Software Ver 2.00 Upgrade Kit (U.S. Only) LN 09B10-01

Blank Floptical LN 05B72-01

AxSYM System Tubing Decontamination Solution LN 07B05-01

IV. INSTALLATION PROCEDURE:

NOTE: Before starting the installation make a current system back-up and print out all of the General Configuration screens.

1. Select CONFIGURATION from the Main Menu.
2. Select INSTALLATION from the Configuration screen.
3. Select F6 - INSTALL VERSION.
4. At the system prompt insert the 2.00/2.05 diskette in the floptical drive and Select OK. The Abbott "A" logo will be displayed for approximately five minutes.
5. Select the language to be installed. The screen will go blank for approximately 10 Seconds.
6. Select PERFORM SOFTWARE INSTALLATION ONLY. DO NOT SELECT the option FORMAT THE HARD DRIVE.
7. Select OK. It will take 30 minutes to load the software.
8. At the system prompt, remove the floptical disk.
9. Select OK. The screen will go blank after which the Main Screen will be displayed.
10. Using the configuration print out that was made before the installation re configure the general configuration.
11. Configure the system for your local language:
    - Select **CONFIGURATION** from the Main Menu.
    - Select **GENERAL** from the Configuration screen.
    - Select General Configuration Parameter 13 System Language>
    - Select desired language
    - Select F6 - Save

    NOTE: If the customer is running AxSYM® HIV-1/HIV-2 on their AxSYM analyzer, the assay diskette must be reinstalled after the 2.00/2.05 upgrade.
12. Perform a system back-up.
13. Remove and discard the Bulk Solution Warning Label (4-64993-01) located at the front of the bulk solutions scale assembly.

A. MODIFICATION CONTROL LABEL

Mark the modification control label to indicate completion of TSB 83-038.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Feeder Shuttle

TSB#: **83-037**

ORIGINATOR: **Harry Durstine**
APPROVED: **Mark Slater 02/08/95**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX - 10121**

Trademark: n/a

IMPLEMENTATION:	TSB Part/Kit #: **4-37035-02**	Upgrade Time: **0.20 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availibility: **13-FEB-95**	Validation Time: **0.30 Hr.**
Instruments Requiring Modification: **S/N 1871 - 2758**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **0.50 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. Distribution:
Worldwide

II. Purpose:
The most recent configuration of feeder assemblies have shuttles made with flame retardant material. Adding the flame retardant made the shuttles on these feeders brittle, causing breaks at the jogger pin and shuttle junction. The feeder assembly should be replaced during the next service call on systems in the 1871-2758 serial number range.

NOTE: Feeders/shuttles in Field stock locations are not affected. Feeders with inferior material were not sent out as spare parts..

III. Administrative Notes:
USA: This TSB should be closed out in FieldWatch as: SC=03 TC=37 RC=93
Parts will be shipped per IRL.

International: The International Service Manager should send forecast requirements to their responsible logistic organization based on the number of instruments affected in your area. Please reference TSB 83-037 on forecast requirements.

IV. Parts:

Part Description	Part number	Quantity
Feeder Assembly	4-37035-02	1

V. Procedure
Modification Steps
1. Perform the instrument shutdown procedure. (From the main screen, press F2 SHUTDOWN. When prompted on the screen, turn the main power switch off.
2. Open the Process Center Cover.
3. Remove the matrix cell feeder by disconnecting the motor and home sensor cables from the Aux Dist Bd and removing the 3 phillip screws that secure the feeder.
4. Install the new feeder assembly. [Reference RR-8 in the service manual if needed.]

Checkout
1. Power the system on. Logon as FSE.
   Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

2. Test the new feeder using the laptop and the sequence MCTEST.seq on the Tools diskette under the directory A:\feeder. (Refer to the Service Manual Section 8 Sequencer.)
3. Update the matrix cell feeder inventory. From the Main Menu:
   - Select INVENTORY.
   - Select F2 MATRIX CELLS

   For each time the sequence MCTEST.seq was run, subtract 35 from the matrix cell inventory level.
4. Logoff as FSE.
5. After completion of this TSB, perform a Total Service Call. Be sure to run controls for at least one FPIA and one MEIA assay.

Modification Control Sticker Update

1. Mark off "37" on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
MEIA Lamp Thumbscrew Access

TSB#: **83-036**

ORIGINATOR: **Harry Durstine**
APPROVED: **Mark Slater 12/8/94**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-2913**

IMPLEMENTATION:	TSB Part/Kit #: **38736-104**	Upgrade Time: **0.2 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availibility: **08-DEC-94**	Validation Time: **0.2 Hr.**
Instruments Requiring Modification: **Serial Numbers 1503 - 2716**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **0.4 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. Distribution:
Worldwide

II. Purpose
The purpose of this TSB is to install a new metal shroud on the inner process center wall which will provide greater access to the MEIA Lamp thumbscrew. Access is increased only if the process plate has the corner cut-out in front of the MEIA Optics (effective 5/6/94, system serial number 1503).

III. Administrative Notes
USA: This TSB should be closed out in FieldWatch as: SC=03 TC=36 RC=93
Field Service Logistics will distribute parts based on the IRL.

International: The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-036 on forecast requirements.

IV. Parts

Part Description	Part number	Quantity
Shroud, MEIA P/S	38736-104	1

V. Procedure

Modification Steps

1. Perform the instrument shutdown procedure. (From the main screen, press F2 SHUTDOWN. After "Shutdown is complete. You may now turn off the power" is displayed, turn off the main power switch.
2. Remove the Matrix Carousel Access panel.
3. Remove the Matrix Cell Hopper and open the Process Center/Incubator door.
4. Open the front leftmost panel/door and then open the MEIA Lamp Power Supply door by loosening the two metal thumbscrews.
5. Disconnect the MEIA Lamp cable and the MEIA Power Supply cable (W22) from the MEIA Lamp Power Supply.
6. On the MEIA Lamp Power Supply Door, remove the screw holding the ground strap.
7. On the MEIA Optics, unfeed the process tubing and also remove the MEIA Optics PCB Cover by loosening the thumbscrew.
8. Remove the MEIA Optics PCB bracket by unfastening the two Phillips screws (leaving the PCB attached to the bracket). This will provide additional room to remove/install the shroud. (It is not necessary to remove any cables from the MEIA Optics PCB.)
9. Remove the screw holding the shroud to the inner Process Area wall.
10. Being careful not to get any cables caught (especially the small red/black cable pair to the MEIA Lamp Power Supply door switch), cautiously remove the shroud from the inner Process Area wall.
11. Remove the ground strap from the inside of the old shroud and install on the new one. Discard old shroud.
12. Feed the MEIA Lamp cable and the MEIA Power Supply cable (W22) through the shroud opening while carefully installing the new shroud.
13. Looking through the Matrix Carousel access opening, ensure tabs on bottom of shroud are both inserted into the holes in the Process Area inner wall.
14. After ensuring the shroud is flush with the structure and no wiring is pinched, use the screw previously removed to secure the shroud to the inner wall.
15. Use the screw earlier removed to secure the ground strap to the MEIA Lamp Power Supply Door.
16. Connect the MEIA Lamp and the MEIA Power Supply cables.
17. Carefully routing the cables, close the MEIA Lamp Power Supply door and tighten the two metal thumbscrews. Close the front leftmost panel/door.
18. Secure the MEIA Optics PCB bracket to the MEIA Optics by fastening the two Phillips screws.
19. On the MEIA Optics install the MEIA Optics PCB Cover and tighten the thumbscrew. Secure the process tubing using the dots marked on tubing and on the cover.
20. Install the side Matrix Carousel access panel.
21. Close the Process Center/Incubator door and install the Matrix Cell Hopper.

Checkout

1. Power the system on. Ensure that the system boots up without errors.
2. After completion of this TSB, perform a Total Service Call. Be sure to run controls for at least one FPIA and one MEIA assay.

Modification Control Sticker Update

1. Mark off "36" on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Sample Barcode Reader [With Secured Internal Copper Shield]

TSB#: **83-034**

ORIGINATOR: **Harry Durstine**
APPROVED: **Mark Slater 11/30/94**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-10,015**

IMPLEMENTATION:	TSB Part/Kit #: **4-38548-02**	Upgrade Time: **0.1 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availibility: **30-NOV-94**	Validation Time: **0.2 Hr.**
Instruments Requiring Modification: **Serial Number < 2417**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **0.3 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. Distribution:
Worldwide

II. Purpose
The purpose of this TSB is to inform the field of a potential problem with Microscan Sample Barcode Reader (4-38548-01). Inside the reader is a small copper shield which is used to control EMF emissions. On several readers, the shield has come loose, causing a component short inside the reader and usually popping the 12V circuit breaker. On these occasions, not only are sample barcode readers needing replaced but the 12V breaker may lead Customer Support and the FSE/FSR to troubleshoot other areas such as the shuttle mechanism.

The TSB will address the Microscan Sample Barcode Reader problem in the field by checking all systems (SN < 2417) for barcode reader serial numbers less than or equal to 9420191. Readers in this range should be replaced with Microscan Reader 4-38548-02. New systems beginning with serial number "2417" will have the 4-38548-02 reader which has the copper shield secured. [The Microscan barcode readers having the copper shield secured are catalog number 4-38548-02 which is a -104 part number.]

III. Administrative Notes
Material availability is dependent upon the return of 4-38548-01 Sample Barcode Readers (to be reworked by Microscan).

USA: Install or verify that the systems indicated have the 4-38548-02 Sample Barcode Reader. After completion, mark off this TSB on the modification control sticker. Close the TSB in FieldWatch as follows:
SC=03 TC=34 RC=93. Parts will be issued per IRL.

International: Install or verify that the systems indicated have the 4-38548-02 Sample Barcode Reader. After completion, mark off this TSB on the modification control sticker. The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-034 on forecast requirements.

IV. Parts

Part Number	Description	Qty
4-38548-02	Sample Barcode Reader	1

V. Procedure
Modification Steps

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

1. Remove the screw on the top of the Sample Barcode Reader Cover. Disconnect W10J1 and remove the cover.
2. Check the serial number of the Sample Barcode Reader.
   - If part number "38548-104" is not labeled on the reader and the reader is serial number 9420191 or less, the reader requires replacement Continue with step 3.
   - If part number "38548-104" is labeled on the reader or if the reader is serial number is greater than 9420191, a new reader is present already. Install the Sample Barcode Reader Cover and secure with the screw previously removed. Proceed to the Check Out section, Step 1.
3. Perform the instrument shutdown procedure. (From the main screen, press F2 SHUTDOWN. After the screen displays "Shutdown is complete. You may now turn off the power," turn the main power switch off.)
4. Unlock/push up the metal clip on the Sample Barcode Reader cable (W176) and disconnect the cable.
5. Remove the Barcode Reader by removing the four (4) screws holding the Sample Barcode Reader to the Reader Bracket.
6. Install Sample Barcode Reader 4-38548-02 and secure with the four screws removed in Step 5.
7. Connect cable (W176) and push down on the metal clip to lock the connection.
8. Connect W10J1. Route W10J1 to avoid pinching and install the Reader Cover. Secure with the screw removed in Step 2.
9. Power the system on. Ensure that the system boots up without errors.
10. Logon as FSE.
11. Perform F3 STARTUP.
12. Perform the Sample Barcode Calibration. From the main menu:
    MAINTENANCE
    CALS AND CHECKS
    SAMPLE BAR CODE
    Follow screen instructions to align beam and press F6-SAVE.
13. Logoff the system. [From the Main Menu, press F6-Logon and then press ENTER.]

Checkout

1. After completion of this TSB, perform a Total Service Call. Be sure to run controls for at least one FPIA and one MEIA assay.

Modification Control Sticker Update

1. Mark off "34" on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
OPTIONAL SAMPLE BAR CODE READER

TSB#: **83-032**

ORIGINATOR: **Jack Hall**
APPROVED: **Mark Slater 5/1/95**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX 3013-002**

IMPLEMENTATION:	TSB Part/Kit #: **4-64890-01**	Upgrade Time: **0.5 Hrs.**
○ Immediate ○ Next Service Call ○ Next Failure ● Optional	TSB Effectivity/ Part(s) Availibility: **08-MAY-95**	Validation Time: **1.0 Hrs.**
Instruments Requiring Modification: **n/a**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.5 Hrs.** ****NOTE** The instrument must be at TSB Level 10B prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
The present sample bar code reader catalog number 4-38548-01 has an oval shape scan spot that allows it to read poor quality labels. But this reader may have trouble reading small compact labels or labels that are applied at an angle.

A new reader, part number 4-64890-01 with a round scan spot has been released as an option for a small number of customers that use the small compressed barcode labels.

If the answers to any one of the following questions is yes and cannot be changed, the 4-64890-01 Optional Barcode Reader should be considered. If the customer is reporting severe barcode reader errors and:

1. The labels are being applied at an angle
   and/or
2. The narrow bar width of labels is 7mil or smaller
   and/or
3. Code 3 of 9 symbology is being used

III. ADMINISTRATIVE NOTES:
International: Send forecasts requirements for 4-64890-01 bar code reader through your normal order entry system.

USA: This sample barcode reader should be ordered by the FSE/FSR if needed to resolve problems reading compressed labels.

IV. SPECIAL TOOLS:
NONE

V. PARTS:
Sample Barcode Reader Part Number 4-64890-01

VI. PROCEDURE:
MODIFICATION STEPS:

1. Perform instrument Shut Down and turn off power.
2. Remove the sample barcode cover.
3. Remove the sample barcode reader from the bracket.
4. Install the new barcode reader.
5. Replace the sample barcode cover.
6. Power up AxSYM® and insure that sample barcode reader is present.

Potential Biohazard, Voltage Hazard, & Laser Hazard. Observe Proper Safety Precautions.

7. Perform the sample barcode reader calibration.
8. Install customer labels on 20 tubes and place into segments.
9. Using diagnostic controls read the labels 10 times without any misreads..
10. Perform Total Call and assay run using the customers sample tubes and barcodes.

MODIFICATION CONTROL STICKER UPDATE:
Mark off TSB 32 on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT ADD	TECHNICAL SERVICE BULLETIN

SUBJECT:
IMPROVED WASTE CONNECTOR

TSB#: **83-031**

ORIGINATOR: **DAVID OTTERMAN**
APPROVED: **Mark Slater 07-NOV-94**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **4-38192-02**	Upgrade Time: **0.5 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **07-NOV-94**	Validation Time: **0.5 Hr.**
Instruments Requiring Modification: **Serial Number 301 - 2400**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.0 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
It has been found, that over time the current Quick Disconnect Elbow fitting (4-38192-01) used in the waste system will degrade. A new connector made of the same material as the female on the waste bottle has been found.
This modification replaces the male connector at the end of the tubing in the Waste Compartment.

III. ADMINISTRATIVE NOTES:
This TSB should be performed during the next service call.
USA only:
This TSB should be closed out in Field Watch as follows: SC=03 TC=31 RC=93
Field Service Logistics will distribute parts based on IRL. Discard old Waste fitting.
International:
Send forecast requirements through World Wide Logistics reference P/N 4-38192-02

Time Required

Modification Time:	0.5 Hr.
Validation Time:	0.5 Hr.
Total Installation Time:	1 Hr.

IV. SPECIAL TOOLS:
NONE

V. PARTS:

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

VI. PROCEDURE:

MODIFICATION STEPS:

A. REPLACEMENT:

CAUTION: Use proper Biohazard precaution when handling components in this area.

1. Open the Waste Compartment Door.
2. Disconnect and remove the Liquid Waste bottle.
3. Use paper towels during the next step to control fluid leakage out of the waste lines.
4. Use a needle nose pliers to loosen the clamp over the old Quick Disconnect Fitting.
5. At the end of the Liquid Waste tubing, remove the old Quick Disconnect Fitting from the clamp.
6. Properly discard the old waste connector.
7. Install the new Quick Disconnect Elbow (4-38192-02).
8. Using a needle nose pliers, move the clamp over the tubing and the barb of the fitting.
9. Check that the clamp and tubing connection are proper and secure.

CHECKOUT:

B. VALIDATION PROCEDURE:

1. Using the MAINTENANCE/PRIME AND FLUSH screen prime the Sample and Process Syringes 3 times each.
2. Check that the tubing and connector clamps are dry.

MODIFICATION CONTROL STICKER UPDATE:

C. MODIFICATION CONTROL STICKER UPDATE:

1. Mark the modification control sticker TSB 83-031 complete.

D. Perform Total Service Call

END OF DOCUMENT
END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
New Matrix Cell Ejector Assembly

TSB#: **83-030A**

ORIGINATOR: **Rod Defibaugh**
APPROVED: **Mark Slater 10/19/94**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-2971**

IMPLEMENTATION: ○ Immediate ● Next Service Call ○ Next Failure ○ Optional Instruments Requiring Modification: **Serial Numbers ≤ 2408**	TSB Part/Kit #: **4-37037-02** TSB Effectivity/ Part(s) Availibility: **19-OCT-94** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **0.25 Hr.** Validation Time: **0.75 Hr.** Total Mod. Time: **1.0 Hr.** ****NOTE** The instrument must be at TSB Level 27 prior to performing this TSB.**

I. Distribution:

International and USA

II. General:

REVISION: Revision "A" changed the instruments requiring modification from S/N 2400 to 2408.

A. Purpose:

To improve the systems Matrix Cell Ejection System the ejector assembly has been modified. This assembly has several improvements:

1. The Ram and Home flag have been modified to hold the flag more securely.

2. The end of the Ram has a bevelled side. The bevelled edge of the New Ram will push the cell on one side and cause the cell to eject easily.

Due to the bevelled edge of the ejector it is now very important to install the ejector in a specific orientation. The ejector MUST be installed with the home sensor facing the back of the instrument.

To achieve the full effect of these improvements TSB 83-027 (Power I/O Board Jumper JM701 Cut) MUST be completed.

B. Administrative Notes:

This TSB should be performed during the next service call.

USA: This TSB should be closed out in Field Watch as follows:
SC=03 TC=30 RC=93
Field Services Logistics will distribute parts based on the IRL. FSR kits will be upgraded with a 4-37037-02.

Return 4-37037-01 per ∅DEF procedure. Use Trouble Code Z7 to receive appropriate credit.

INTERNATIONAL: Send parts forecast through to World Wide Logistics Dallas. Reference part number 4-37037-02.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

This is a Next Service Call upgrade. Send all current stock of the Old 4-37037-01 Matrix Cell Ejector Assembly to Dallas per existing RMA procedures.

C. Time Required:

Upgrade Time: 0.25 Hr.
Validation Time: 0.75 Hr.

Total Mod. Time: 1.00 Hr.

D. Tools required:

8" #1 Phillips Screw Driver

E. Parts:

Part Description	Part number/Catalog number	Quantity
Ejector Assembly	4-37037-02	1

III. Procedure:

A. REPLACEMENT

CAUTION: This modification replaces a waste system component. As always, use proper biohazard precautions.

1. Check that TSB 83-027 is complete.

NOTE: Refer to RR-13 in your service manual.

2. Shutdown the system, open the Processing Center cover.
3. At the Auxiliary Process Distribution Board, located at the right side of the Feeder Assembly, remove the two screws holding the cover.
4. At the board, disconnect J 4 (Ejector Motor W16) and J 5 (Ejector Home Sensor W15).
5. Free these cables from their clamp ties and clamps.
6. At the Ejector Assembly, remove the two screws holding the Ejector to the Processor Plate.
7. Remove the screw holding the Ejector Ground Wire to the Process Plate.
8. Remove and clean the Matrix Carousel. Check that carousel cell tension springs are not broken.
9. Install the New Ejector 4-37037-02 with the bevelled Ram by reversing the steps above.

NOTE: THE NEW EJECTOR MUST BE INSTALLED WITH THE HOME SENSOR AT THE REAR OF THE ASSEMBLY. The ejectors home sensor MUST be on the side nearest the Optics Signal Processing Board.

B. VALIDATION PROCEDURE:

1. Turn on System Power and perform a Start Up (F3). At the prompt, request a cleanup.
2. Using the Sequencer perform a Matrix Cell Load Test [MCTEST] (VP-13).
3. Should an error occur, check the cable connections.
4. If the problem remains, call technical support. Suspect Matrix Carousel and its V-Wheels.

C. MODIFICATION CONTROL LABEL:

Mark the modification control TSB 83-030 complete.

D. PERFORM TOTAL SERVICE CALL

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Software Version 1.33 (MDS - Canada Only)

TSB#: **83-028**

ORIGINATOR: **Ron Elston**
APPROVED: **Harry Durstine for Mark Slater 10/6/94**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-10,009**

IMPLEMENTATION: ○ Immediate ● Next Service Call ○ Next Failure ○ Optional Instruments Requiring Modification: **Serial Numbers: Instruments at MDS Canada sites only.**	TSB Part/Kit #: **64892-101** TSB Effectivity/ Part(s) Availibility: **07-OCT-94** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **1.5 Hr.** Validation Time: **0.5 Hr.** Total Mod. Time: **2.0 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide (Canada Only)

II. PURPOSE:
The purpose of this TSB is to inform the field of the release of Software Version 1.33. This software is specifically designed to be released as a unique AxSYM System Software version with distribution to MDS reference laboratory in Toronto, Canada and its satellite labs only. The software is intended to integrate an AxSYM instrument into an automated laboratory environment.

III. ADMINISTRATIVE NOTES:
USA: This TSB is specific to MDS - Canada Only.
International: This TSB is specific to MDS - Canada Only. The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-028 on forecast requirements.

IV. PARTS:

Part Number	Description	Qty
64892-101	Software Version 1.33	1

V. PROCEDURE:
Modification Steps

1. From the Main menu, Press F6 and Log onto the system as FSE.
2. Select CONFIGURATION/GENERAL menu.
3. Press [Alt] and [Print] simultaneously to print the current configuration screen.
4. Use the Page Down arrow to scroll and copy the remaining configuration screens.
5. Set the printouts aside to use after software installation is complete.
6. Return to the main menu.
7. Insert the System Software Version 1.33 diskette (64892-101) into the floptical drive.
8. Select CONFIGURATION/INSTALLATION menu.
9. Select [F6] INSTALL VERSION.
10. Select OK.
11. Select ENGLISH
12. Select PERFORM SOFTWARE INSTALLATION ONLY. Note: Do Not Format the hard drive.
13. Select OK.
14. At the completion of software installation, remove the diskette from the floptical drive and select OK.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

15. Select CONFIGURATION/GENERAL menu
16. Edit the default configuration items that have changed to default values during software installation.

Checkout

1. After completion of this TSB, perform a Total Service Call. Be sure to run controls for at least one FPIA and one MEIA assay.

Modification Control Sticker Update

1. Mark off "28" on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Power I/O Jumper Cut

TSB#: **83-027**

ORIGINATOR: **Ron Elston**
APPROVED: **Jack Hall for Mark Slater 9/21/194**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-2971**

IMPLEMENTATION: ○ Immediate ● Next Service Call ○ Next Failure ○ Optional Instruments Requiring Modification: **Serial Numbers < 2386**	TSB Part/Kit #: **N/A** TSB Effectivity/ Part(s) Availibility: **N/A** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **0.2 Hr.** Validation Time: **0.3 Hr.** Total Mod. Time: **0.5 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. GENERAL:

A. Purpose:
The purpose of this TSB is to inform the field of a modification to be made to the Power I/O PCB. The modification involves cutting of jumper JM701. Cutting this jumper will help improve the performance of the ejector.

B. Administrative Notes:
USA: This TSB should be closed out in FieldWatch as follows: SC=03 TC=27 RC=93. All individual FSR kits should be modified using this TSB, steps 4, 5, and 6.

International: Inventory in all worldwide stock locations should be modified using this TSB, steps 4, 5, and 6. No Parts will be distributed at No Charge.

C. Time Required:
Modification time = 0.2 hour
Validation time = 0.3 hour
Total time = 0.5 hour

D. Tools required:
Small Flat screwdriver
Wire Cutters

E. Parts:
None required

III. PROCEDURE:
1. Perform the instrument shutdown procedure and power off the system.
2. Access the Card Cage Assembly by removing the Card Cage Access Panel cover.
3. Remove the Power I/O PCB (37430) in slot #4 of the power card cage.
4. Locate jumper JM701 referenced in Figure #1.

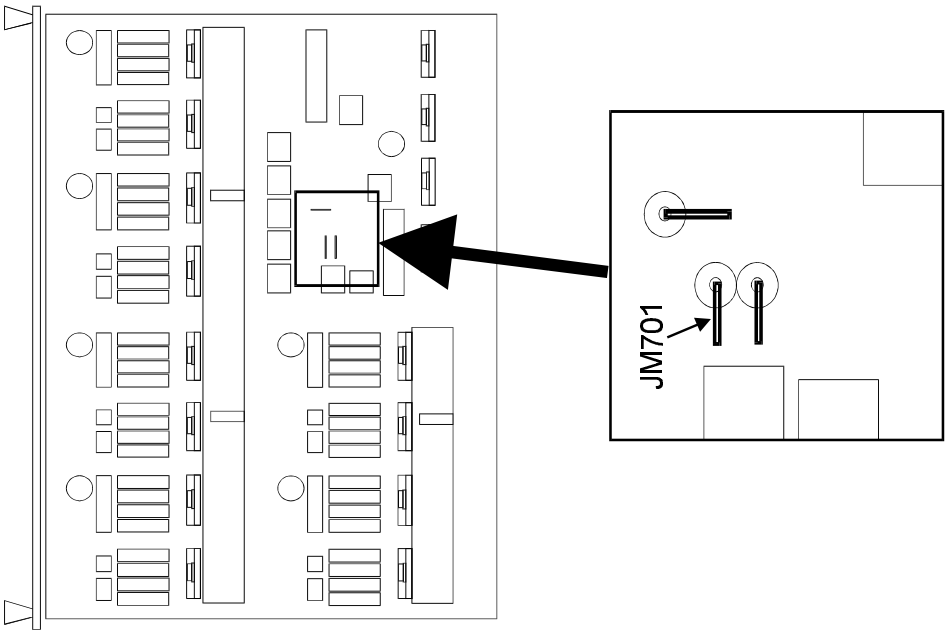


Fig. 1

5. Using wire cutters, cut jumper JM701 as close as possible to the board for each leg. See Figure #2.
6. Verify that all pieces of the jumper are removed from the board to prevent possible shorting.
7. Re-install the modified Power I/O into the card cage.

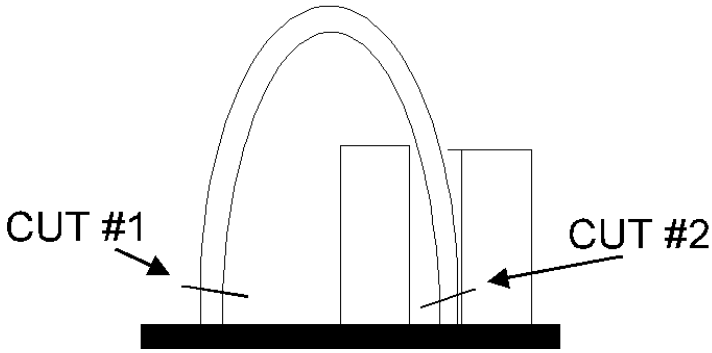


Fig. 2

VALIDATION

1. Perform MCTEST.SEQ.
2. Mark the modication control label to indicate completion of TSB # 83-027.
3. At the completion of this modification perform a Total Service Call.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
New Matrix Cell Hopper

TSB#: **83-026**

ORIGINATOR: **Harry Durstine**
APPROVED: **Mark Slater 9/26/94**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX - 2929**

IMPLEMENTATION:	TSB Part/Kit #: **LN 4B04-01**	Upgrade Time: **0.2 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availibility: **06-OCT-94**	Validation Time: **0.0 Hr.**
Instruments Requiring Modification: **Serial Numbers < 2377**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **0.2 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. Distribution:

Worldwide

II. Purpose

The purpose of this TSB is to inform the field of structural improvements made to the Matrix Cell Hopper Assembly. The changes include:

- Thick bar added under the front end to prevent the hopper from rocking
- Snap holes smaller on bottom of hopper for tighter fit on feeder grip pins
- Screw added to the upper roller supports to eliminate gluing the support to the hopper walls

These improvements will provide a sturdier fit when the hopper is placed on the system. It is important that the existing hopper(s) at the customer site be removed for proper tracking of this TSB.

III. Administrative Notes

Mark off this TSB on the modification control sticker as complete after installing a new Hopper Assembly. [Hopper Assembly (LN 4B04-01) will contain Hopper 37262-104.]

USA: For service calls, this TSB should be closed out in FieldWatch as follows:
SC=03 TC=26 RC=93

International: The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-026 on forecast requirements.

IV. Parts

List Number	Description
4B04-01	Hopper Assembly

V. Procedure

Modification Steps

1. Remove existing hopper assembly.
   CAUTIONS:
   - Do not use gloves containing powder.
   - Do not touch the funnel/matrix.
   - Do not get bodily fluids (i.e. from sneezing) on the matrix cells.

   Be sure no matrix cells are loaded vertically. (The customer cannot order matrix cells separately.)
2. Install new hopper assembly.
3. Update/verify the matrix cell inventory under the INVENTORY screen.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

4. Inform the customer that the new hopper will fit tighter on the feeder grip pins.
5. Remove the old hopper from the customer site and discard. (Do not leave old hoppers behind to ensure that only new hoppers are being used in the field.)

Checkout

1. After completion of this TSB, perform a Total Service Call. Be sure to run controls for at least one FPIA and one MEIA assay.

Modification Control Sticker Update

1. Mark off "26" on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
1.25 SOFTWARE

TSB#: **83-025A**

ORIGINATOR: **DAVID OTTERMAN**
APPROVED: **Mark Slater 10-19-94**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-2968**

IMPLEMENTATION: ○ Immediate ○ Next Service Call ○ Next Failure ● Optional Instruments Requiring Modification: **n/a**	TSB Part/Kit #: **LN 5B80-025** TSB Effectivity/ Part(s) Availibility: **19-OCT-94** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **1.0 Hr.** Validation Time: **0.5 Hr.** Total Mod. Time: **1.5 Hr.** ****NOTE** The instrument must be at TSB Level 10B prior to performing this TSB.**

<< INDICATES CORRECTIONS MADE TO THIS TSB.

I. DISTRIBUTION:

Worldwide

II. PURPOSE:

The present 1.25 diskette contains a Robo.Cal file used in the script file that causes the robotics calibration file not to be saved.
The purpose of this TSB is to instruct the field on how to correct Robo.Cal in 1.25 Software.
This file affects the following robotics calibrations:

- Sample and Process Pipettor calibration
- Sample Bar Code Reader calibration
- Reagent Pack Actuator calibration
- MEIA Station Calibration

We have also found that reported error messages are not displayed in their chosen languages but in English. A file will be copied onto the hard drive to correct this.
There will be two procedures covered. Procedure **A** will be for customers that presently have 1.25 software on their system. Procedure **B** will be for new installations.

NOTE: THE 1.25 SOFTWARE KIT WILL NOT BE SENT TO THE CUSTOMER FOR INSTALLATION. INSTALLATION OF THE 1.25 SOFTWARE WILL ONLY BE PERFORMED BY AN FSR/FSE

<< Customers using 1.25 software who are configured with sample tubes without barcode labels will have an error message ("4010-ERROR BAR CODE LABEL BLANK SAMPLE POSITION XX) displayed as a red pop-up every time the Bar Code reader tries to read a tube position. The Software is scanning each sample to distinguish between a tube and a sample cup adapter.
This only occurs when the customer is configured in languages other than English.
The purpose of this procedure is to change the display of the error message from a red pop-up to the temporary message history log.
When this procedure is completed, all error messages throughout the system will be displayed in English. All other screens will be in the native language selected in the Configuration/General field 12.
This will also change the "Message History Log, from that date forward, to English.
If the customer should happen to run out of bar code labels, they will have to acknowledge each of the red pop-up until labels are available.
Software version 2.05 will correct this problem.

III. ADMINISTRATIVE NOTES:

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

International: **ORDERS CAN ONLY BE PLACED FROM CUSTOMER SERVICE ORGANIZATIONS.** Send forecasts requirements for LN 5B80-01 (1.25 software) through your normal order entry system.

USA: This software version is primarily for International use. Do not order this kit for normal field replacement of 1.2 software.

IV. SPECIAL TOOLS:

NONE

V. PARTS:

1.25 Software Floptical Diskette P/N LN 5B80-025

NOTE: The instrument must be at TSB level 10B before performing this procedure.

VI. PROCEDURE:

MODIFICATION STEPS:

A. Instruments that have 1.25 Installed:

The following procedure will install all translated error messages.
NOTE: {*sp*} = 1 space
NOTE: For countries that do not have "\" on their keyboard substitute ALT-9-2. When you release the ALT key the "\" will appear.

1. After a successful boot up, insert the 1.25 Software floptical disk into the floptical drive.
2. Press F6 and Log onto the system as FSE.
3. Press [Ctl]-[F2] simultaneously.
4. Type COPY{*sp*}F:\AXSYM\DATA\ERRDATA*.*{*sp*} H:\AXSYM\DATA*.* and press [ENTER].
5. At the completion of step 4 Press [Ctl]-[F2] to return to the main menu.
6. Select "Configuration" to enter the configuration screen.
7. Select "GENERAL".
8. Select Field 12, "SYSTEM LANGUAGE".
9. Select the language you desire.
10. Press F6 (Save).
11. Remove the floppy disc from the floptical drive.
12. A warning pop-up will be displayed "Warning - Changes in System Language will Automatically Reset the System.
13. Select "OK".
14. Recalibrate the following:
    - Sample and Process Pipettor
    - Sample Barcode Reader
    - Reagent Pack Actuator
    - MEIA Station Cal

B. New Installations:

NOTE: {*sp*} = 1 space
NOTE: For countries that do not have "\" on their keyboard substitute ALT-9-2. When you release the ALT key the "\" will appear.

1. After a successful boot up insert the 1.25 Software floptical disk into the floptical drive.
2. Press F6 and log onto the system as FSE.
3. Press [Ctl]-[F2] simultaneously.
4. Type DEL{*sp*}\AXSYM\DATA\ERRDATA*.* and press [ENTER].
5. Type CD{*sp*}\AXSYM\SYSTEM and press [ENTER].
6. Type MKDIR{*sp*}\AXSYM\SYSTEM\BACKUP and press [ENTER].
7. Type CD{*sp*}\AXSYM\SYSTEM\BACKUP and press [ENTER].
8. Type COPY{*sp*}\AXSYM\SYSTEM*.* and press [ENTER].
9. Wait for the H:\AXSYM\SYSTEM\BACKUP to return to the screen. Depending on the size of the data base will determine how long it will take to copy these files.
10. Press [Ctl[-[F2] simultaneously to return to the main menu.
11. Select "CONFIGURATION", "INSTALLATION" menu.
12. Perform the REV. 1.25 Software Installation (DO NOT SELECT "FORMAT").
13. Select [F6] INSTALL.
14. At the completion of Installation return to the H:> prompt by pressing [Ctl]-[F2].
15. Type CD{*sp*}\AXSYM\SYSTEM and press [ENTER].

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

16. Type COPY{*sp*}BACKUP*.* and press [ENTER].
17. Wait for the H:\AXSYM\SYSTEM to return to the screen
18. Press [Ctl]-[F2] to return to the operating system.
19. Remove the floppy from the floptical drive.
20. Select "CONFIGURATION", "GENERAL" menu.
21. Select Field 12, "SYSTEM LANGUAGE".
22. Select the language you desire.
23. Press [F6] to Save the selection
24. A Warning pop up will be displayed "Changes in System Language will Automatically Reset the System"
25. Select OK.
26. Continue with the normal Installation procedure as stated in Section 7 of the Service manual.

If the Customer has a back-up copy of their system software ensure the present software version has been copied onto their diskette.

<< C. PROCEDURE TO REPLACE THE FRENCH, ITALIAN, GERMAN AND SPANISH ERROR MESSAGES TO ENGLISH.

NOTE: {*sp*} =1 space

1. Press F6 and log onto the system as FSE
2. With power on Press Ctl-F2 simultaneously.

At the H:> type the following:

3. CD{sp}\AXSYM\DATA
4. Type COPY{sp}ERRDATAE.DATspERRDATAF.DAT<Enter>
5. Type COPY{sp}ERRDATAE.DATspERRDATAG.DAT<Enter>
6. Type COPY{sp}ERRDATAE.DATspERRDATAI.DAT<Enter>
7. Type COPY{sp}ERRDATAE.DATspERRDATAS.DAT<Enter>
8. Type COPY{sp}ERRDATAE.IDXspERRDATAF.IDX <Enter>
9. Type COPY{sp}ERRDATAE.IDXspERRDATAG.IDX<Enter>
10. Type COPY{sp}ERRDATAE.IDXspERRDATAI.IDX<Enter>
11. Type COPY{sp}ERRDATAE.IDXspERRDATAS.IDX<Enter>
12. Press Ctl-F2 simultaneously.
13. Perform a proper Shutdown procedure, then power the system back on.

IV. VALIDATION

Perform a Start UP (F2) and immediately Press the STOP key. Ensure the Red Popup is in the correct language. Once this has been confirmed Press F2 to home all robotics and continue with the Installation procedure as stated in Section 7 of the Service Manual.

Choose an MEIA assay and run all three controls in triplicate.

MODIFICATION CONTROL STICKER UPDATE:

Mark off TSB 25 on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
OSP Digital Board ESD Improvement

TSB#: **83-024A**

ORIGINATOR: **Harry Durstine**
APPROVED: **Mark Slater 9/26/94**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX - 2923**

IMPLEMENTATION: ○ Immediate ○ Next Service Call ● Next Failure ○ Optional Instruments Requiring Modification: **Serial Numbers ≤ 1900**	TSB Part/Kit #: **4-37326-03** TSB Effectivity/ Part(s) Availibility: **25-JUL-94** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **0.3 Hr.** Validation Time: **0.7 Hr.** Total Mod. Time: **1.0 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:

The purpose of this TSB is to inform the field of an improvement in the OSP Digital Board that will require existing OSP Digital/Analog
PCB Sets in FSE/FSR kits and depot locations to be returned. The OSP Digital Board improvement decreases its susceptibility
to electrostatic discharges. The OSP Digital Board along with 2 OSP Analog Boards make up the OSP Digital/Analog PCB Set.

III. ADMINISTRATIVE NOTES:

Note: Mark off this TSB on the modification control sticker as complete after installing a 4-37326-03 OSP set into a system on a Next Failure basis. (The 4-37326-03 will include an OSP Digital Board "-105".)

USA: For service calls, this TSB should be closed out in FieldWatch as follows:
SC=03 TC=24 RC=93
For replenishment of a 4-37326-02 in an FSR service kit, open a call in FieldWatch as a dummy site 0DEF. Show usage of the part and use TC=A6.

International: The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-024 on forecast requirements.

IV. PARTS:

Domestic: For service calls, this TSB should be closed out in FieldWatch as follows: SC=03 TC=24 RC=93
For replenishment of a 4-37326-02 in an FSR service kit, open a call in FieldWatch as a dummy site 0DEF. Show usage of the part and use TC=A6.

International: The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-024 on forecast requirements.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

V. PROCEDURE:

Modification Steps

1. Perform the instrument shutdown procedure. (From the main screen, press F2 SHUTDOWN. After the screen displays "Shutdown is complete. You may now turn off the power," turn the main power switch off.)
2. Open the Process Center/Incubator door.
3. Disconnect (9) connectors from the top of the OSP Cardcage.
4. Remove the Cardcage Cover.
5. Using proper electrostatic precautions, remove the (4-37326-02) OSP Digital/Analog PCB Set. Note: The boards are physically attached.
6. Again using proper electrostatic precautions, install the (4-37326-03) OSP Digital/Analog PCB Set.
7. ➔ Feed the ground cable (W127) through the grating of the Cardcage Cover.
8. ➔ While installing the Cardcage Cover, connect the ground cable (W127) on the outside of the cover using the leftmost front screw.
9. Reconnect the (9) connectors at the top of the OSP Cardcage.

Checkout

1. Power the system on. Ensure that the system boots up without errors.
2. Perform an MEIA Station Calibration.
3. Perform an MEIA Optics Initialization.
4. Perform an FPIA Optics Initialization.
5. After completion of this TSB, perform a Total Service Call. Be sure to run controls for at least one FPIA and one MEIA assay.
   Inform the primary operator that the new OSP set may have affected their calibration curves. Instruct the operator to run controls for all assays before releasing results.

Modification Control Sticker Update

1. Mark off "24" on the Modification Control Sticker.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
JIS FERRITE CORE KIT

TSB#: **83-023**

ORIGINATOR: **David Otterman**
APPROVED: **Mark Slater 9/13/94**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-2942**

IMPLEMENTATION: ○ Immediate ● Next Service Call ○ Next Failure ○ Optional Instruments Requiring Modification: **Serial Numbers 301 - 1300**	TSB Part/Kit #: **64776-101** TSB Effectivity/ Part(s) Availibility: **12-SEP-94** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **0.5 Hr.** Validation Time: **0.5 Hr.** Total Mod. Time: **1.0 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. GENERAL:

A. Purpose:

The 4-37084-01 power supply, in instruments below S/N 1300, does not meet Koseisho Leakage Current requirements. By attaching Ferrite resistor cores to cables J9 and J13, located on the power supply, all instruments will be in JIS compliance.

B. Administrative Notes:

USA only: FSR should review their IRL and order kits as needed.
This TSB should closed out in FieldWatch as follows: SC=03 TC=023 C=93

International: The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 083-023 on forecast requirements.

C. Time Required:

Modification Time	Validation Time	Total Mod. Time
0.5 Hr.	0.5 Hr.	1.0 Hr.

D. Tools required:

Phillips Screwdriver

E. Parts:

The 64776-101 upgrade kit contains the following items:

Part Description	Part number/Catalog Number	Quantity
Ferrite Core	14108-057	2
Tie Wrap	14277-105	4

III. PROCEDURE:

This procedure can be performed with power on.

1. Remove the back sheet metal cover of the instrument
2. Locate J9 and J13 that are connected to the power supply. These are the heater cables to

the diluent and air heater blocks.

3. Snap the Ferrite Core approximately 2 inches away from the connector J9.
4. Snap the Ferrite Core approximately 2 inches away from the connector J13.
5. Place Tie wraps on both sides of the Ferrite cores. This will keep them from moving up and down the cable.
6. Re-install the back cover.

IV. VALIDATION:

1. Go into the MAINTENANCE/CALS AND CHECKS.
2. Ensure the temperature for both Air and Diluent heater blocks are within their proper range.

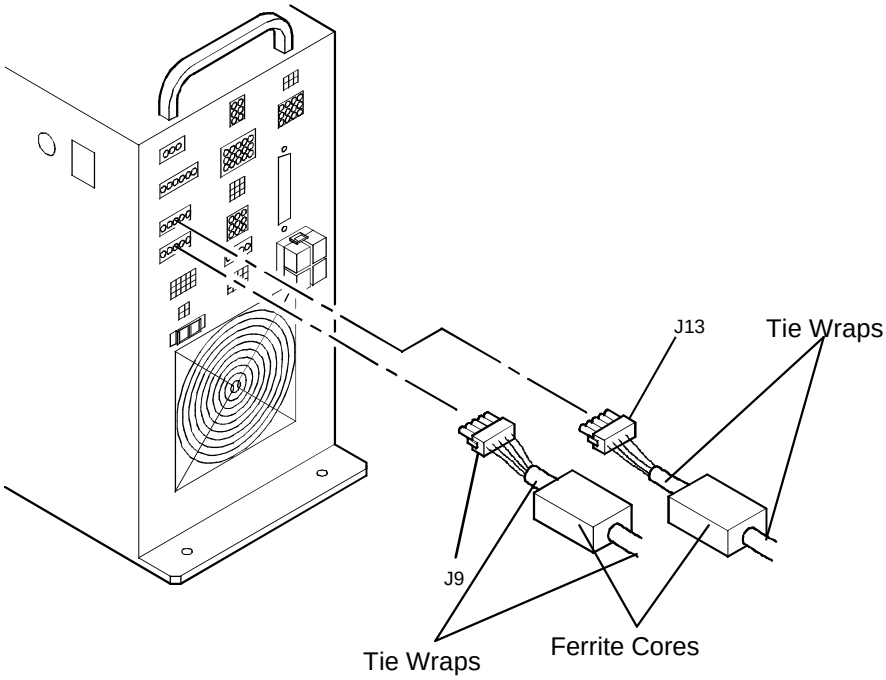


Fig. 1

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Syringe Mounting Adapter

TSB#: **83-022**

ORIGINATOR: **Rod Defibaugh**
APPROVED: **Emile Diou for Mark Slater 5/26/94**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION: ○ Immediate ● Next Service Call ○ Next Failure ○ Optional Instruments Requiring Modification: **< 1612**	TSB Part/Kit #: **64624-101** TSB Effectivity/ Part(s) Availability: **06-JUN-94** **TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Upgrade Time: **0.25 Hr.** Validation Time: **0.25 Hr.** Total Mod. Time: **0.50 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:

Worldwide

II. PURPOSE:

The Syringe to Probe Link Tubing and Syringe Valve were intended to be customer replaceable parts. However, due to the mounting configuration of the Syringe Assemblies, the customer could not gain access to these components.

To provide the customer access to the Syringe Assembly tubing connections and valve, an adapter plate (P/N 64624-101) has been developed. The adapter adds hooks to the back of the syringe assembly. On systems with serial numbers ≥ 1000, these hooks will utilize existing mounting holes on the system.

On Systems 300 - 536, with the replacement of the Sample Syringe Bracket this feature can be added to the **SAMPLE** Syringe assembly **ONLY**. The interior of the process area does not have the required holes for the Process Syringe.

It is also a function of this TSB to provide the Field Service Engineer/Field Service Representative with documentation to assist in training the system key operators*****. The key operators must be trained on how to remove and install the syringe assemblies. Due to the electrical and fluid connections on the syringe assembly, the operators must use care to prevent fluid leaks, crimped tubing and/or poor electrical connections after syringe maintenance.

***** Key Operators are Abbott trained persons responsible for the maintenance of the system.

AS WITH ALL TSBs, THIS TSB SHALL NOT BE LEFT WITH AN OPERATOR OR CUSTOMER.

SERVICE SPARES

The current field stock of Syringe Assemblies (4-37037-01) will not be upgraded with the adapter.

Until the current stock of the Syringe Assemblies (4-37037-01) are depleted, when a syringe assembly fails, the adapter (64624-101) must be removed from the failed assembly and transferred to the new assembly.

As the current stock of assemblies are depleted, the new assemblies supplied to the 4-37037-01 part

will have the adapter added by manufacturing.

III. ADMINISTRATIVE NOTES:
N/A

IV. SPECIAL TOOLS:
10" Phillips Screwdriver

V. PARTS:

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

VI. PROCEDURE:

MODIFICATION STEPS:
Time Required:

Modification Time: 0.25 Hr.
Validation Time: 0.25 Hr.

Total Installation Time: 0.5 Hr.

Systems 300 - 536

1. From the Main Menu , press F2 "Shutdown".
2. At the Power Supply, turn OFF system power.
3. Open the Process Center Cover and Sample Syringe Access Panel.
4. Remove the four screws holding the syringe assembly to the bracket.
5. Carefully extend the electrical cable and tubing to allow the assembly to be laid on the RV Carousel near the pause and advance switches.
6. Remove the two screws holding the Sample Syringe Bracket to the system.
7. Install the new Sample Syringe Bracket (4-38184-01).
8. Using the four screws removed above, attach the Syringe Adapter (64624-101) to the back of the syringe assembly.
   NOTE: The hooks on the adapter plate should be pointing down (towards the syringe head).
9. Lift the assembly and insert the adapter hooks into the four holes on the bracket.
10. To latch the assembly into position, press down.
11. Check that the cables and tubing are routed in a manner that prevents them from being pinched as the access door is closed.
12. Perform the Validation Procedure.

Systems ≥ 1000

1. From the Main Menu , press F2 "Shutdown".
2. At the Power Supply, turn OFF system power.
3. Open the Process Center Cover and Sample Syringe Access Panel.
4. Remove the four screws holding the syringe assembly to the bracket.
5. Carefully extend the electrical cable and tubing to allow the assembly to be laid on the RV Carousel near the pause and advance switches.
6. Using the four screws removed above, attach the Syringe Adapter (64624-101) to the back of the syringe assembly.
   NOTE: The hooks on the adapter plate should be pointing down. (towards the syringe head).

7. Lift the assembly and insert the adapter hooks into the four holes on the bracket.
8. To latch the assembly into position, press down.
9. Check that the cables and tubing are routed in a manner that prevents them from being pinched as the access door is closed.
10. At the process area, remove the four screws holding the Processing Syringe assembly to the wall.
11. Carefully extend the electrical cable and tubing to allow the assembly to be laid on the Processing Carousel.
12. Using the four screws removed above, attach the Syringe Adapter (64624-101) to the back of the syringe assembly.
    NOTE: The hooks on the adapter plate should be pointing down. (towards the syringe head).
13. Lift the assembly and insert the adapter hooks into the four holes located on the front wall of the process area.
14. To latch the assembly into position, press down.
15. Check that the cables and tubing are routed in a manner that prevents them from being pinched.
16. Perform the Validation Procedure.

CHECKOUT:

VALIDATION PROCEDURE:

1. Turn on system power.
2. After boot up is complete, press F3 "Start Up".
3. From the Maintenance/Prime and Flush screen, perform 2 Flush cycles on both the Process and Sample Syringe Assemblies.
   Check each syringe tubing connection for leaks.
4. After the system has completed warming, perform a Total Service Call.

SYRINGE ASSEMBLY REPLACEMENT:

Until the current stock of the Syringe Assemblies (4-37037-01) are depleted, the adapter (64624-101) must be removed from the failed assembly and transferred to the new assembly.

KEY OPERATOR* TRAINING:

* Key Operators are Abbott trained persons responsible for the maintenance of the system.

NOTE: AS WITH ALL TSBs, THIS TSB SHALL NOT BE LEFT WITH AN OPERATOR OR CUSTOMER.

1. Instruct the Key Operator on how to remove and install the syringe assemblies.
   The key operators must be comfortable with their abilities to perform the following:
   a. Remove and install the syringe assemblies.
   b. Check tubing connections for leaks.
   c. Check tubing for crimps.
   d. Check Syringe Assembly Interface Cable (J1), Home Sensor (J2), Motor (J3) and Valve (J4), electrical connections are properly installed.
   e. Using the Operation Manual Maintenance Procedures to replace the Syringe Valve. Note to the operator the importance of the valve seals inside the syringe head.
   f. Using the Operation Manual Maintenance Procedures to replace the Probe Link Tubing. Note to the Operator the importance of the ferule on the ends of the tubing.
2. Ensure the operator understands that after each syringe maintenance, the syringe must be flushed and the tubing inspected for crimps and leaks.
3. Should the operators require any additional training or support information, contact your area customer support group.

MODIFICATION CONTROL STICKER UPDATE:

Mark the Modification Control Label TSB 22 complete.

END OF DOCUMENT
END OF DOCUMENT
Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Disk Drive Assembly Bracket/Hard Drive Firmware 4.302

TSB#: **83-021**

ORIGINATOR: **Jim Rydberg/Ron Elston**
APPROVED: **Mark Slater 05/27/94**

PRODUCT:
AxSYM® (83)

REF. ECO:

Trademark: AxSYM is a registered trademark of Abbott Laboratories.
* The following instruments have been upgraded in the factory: 1460, 1483, 1510, 1522, 1523, 1524, 1525, 1526, 1536, 1562, 1568, 1584, and 1585.

IMPLEMENTATION:	TSB Part/Kit #: **64758-101**	Upgrade Time: **1 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **06-JUN-94**	Validation Time: **0.5 Hr.**
Instruments Requiring Modification: **< 1591***	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.5 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
WORLDWIDE

II. PURPOSE:
This TSB is to inform the field of the release of an improved Disk Drive Assembly Bracket and a new version of hard drive firmware. The bracket is designed to decrease the amount of vibration that is transferred to the Hard Drive. The new firmware will eliminate other non-vibrational "0734 errors" and a problem associated with rev 4.2 firmware "read cache" errors (examples: blank display and system lockups at bootup).

III. ADMINISTRATIVE NOTES:
N/A:

IV. SPECIAL TOOLS:
Phillips #1 Screw Driver
PLCC Extraction Tool (included in the Kit)
Feeler Gauge

V. PARTS:

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

VI. PROCEDURE:

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

MODIFICATION STEPS:
Time Required:

UPGRADE TIME: 1.0 Hr.
VALIDATION TIME: 0.5 Hr.

TOTAL MOD. TIME: 1.5 Hr.

NOTE: STATIC PRECAUTIONS ARE NECESSARY WHEN REMOVING THE CHIP FROM THE HARD DRIVE!
NOTE: HARD DRIVES THAT DO NOT HAVE THE SOCKETED CHIP CAN NOT BE REWORKED. THEY WILL NEED TO BE REPLACED.

1. Perform a system shutdown and power the instrument down.
2. Remove the Electronic cover from the instrument.
3. Install (1) 64701-101 (Terminator Cover) and (1) 64702-101 (Cover Clamp) on the Electronic cover using (2) #6-32 x .375 sems screws, (14494-106). The flanged edge of the Cover Clamp must be parallel to the lower edge of the cutout for the floptical disk drive. The Terminator cover must completely cover the cutout in the panel it is positioned over . There must be a .060" gap between the cover and the bottom of the floptical drive (The gap will need to be adjusted using the feeler gauge after the cover has been replaced at the end of this procedure.)
4. Remove the (2) screws holding the Disk Drive Bracket Assembly on the Speaker/Disk Drive bracket (retain the sems screws to be used when reinstalling the new Disk Drive Bracket Assembly.
5. Remove the Disk Drive Bracket Assembly from the Speaker/Disk Drive bracket.
6. Disconnect the SCSI and Power cables.
   NOTE: The SCSI cable is held on the Disk Drive Bracket Assembly by a bar clamp with 2 nuts. The clamp (if present) will need to be removed and reinstalled on the new bracket in a later step.
7. Remove the Speaker from the Speaker/Disk Drive bracket.
8. Remove the Floptical and Hard drives from the Disk Drive Bracket Assembly and set aside. Use caution when handling the Hard drive. The Floptical and Hard drive are **very** sensitive to mechanical shock.
9. Remove the Speaker/Disk Drive bracket on the instrument.
10. Install the Ground Strap, using (1) 10-32 x .625 lg. sems screw, to the ear located on the left side of the Speaker/Disk Drive bracket.
11. Install the new Speaker/Disk Drive bracket.
12. **Using the chip extraction tool provided** with the rev. 4.302 firmware, remove the 4.2 firmware from the Hard Drive and install rev. 4.302 firmware. Refer to figure 2 for location and proper orientation of the chip. Remark the Hard Drive with 4.302, refer to figure 3.
13. Install the Floptical and Hard drives into the new Disk Drive Bracket Assembly.
14. Connect the SCSI and Power cables. Reinstall the SCSI cable clamp if applicable. Install the free end of the Ground Strap to the back left side of the Disk Drive Bracket Assembly with (1) 10-32 x .625 lg. sems screw.
15. Install the Disk Drive Bracket Assembly into the Speaker/Disk Drive bracket.
    NOTE: There are (2) additional screws (14494-308 10-32 x .500 (lg. sems screws) holding the Disk Drive Bracket to the Speaker/Disk Drive bracket. The extra screws are included in the kit.
16. Replace the Electronic Cover.

CHECKOUT:
1. Power the system on. Insure that the system boots up and there are no errors.

MODIFICATION CONTROL STICKER UPDATE:
1. Mark off #21 on the Modification Control Sticker
2. After completion of this TSB perform a Total Service Call.

Figure 1.

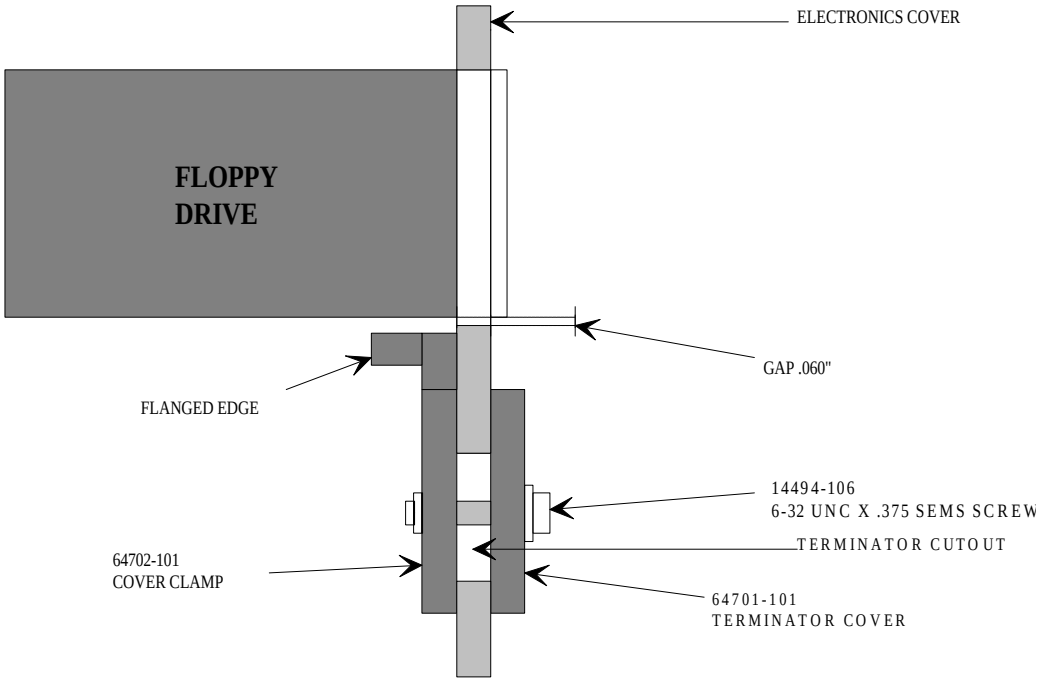
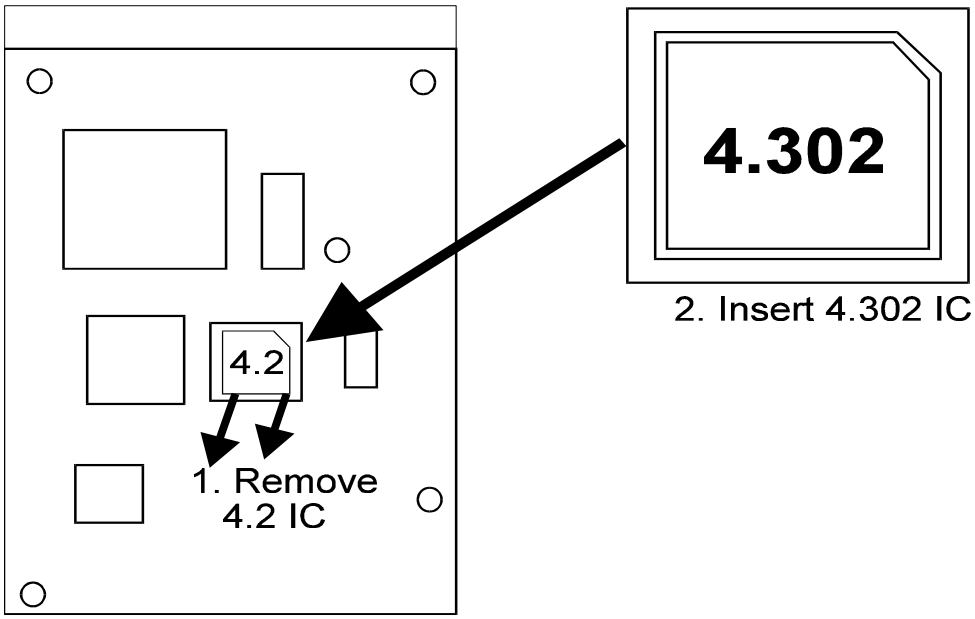
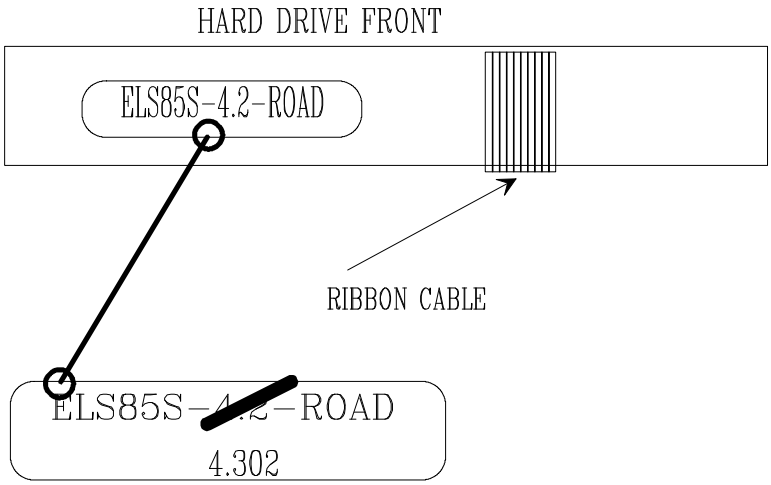


Figure 2.



Component side of Hard Drive

Figure 3.



END OF DOCUMENT

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Sampling Syringe Assembly Bracket

TSB#: **83-020A**

ORIGINATOR: **Harry Durstine**
APPROVED: **Mark Slater 5/19/94**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **N/A**	Upgrade Time: **0.2 Hr.**
● Immediate ○ Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **24-MAR-94**	Validation Time: **0.3 Hr.**
Instruments Requiring Modification: **1427, 1423, 1422, 1421, and 1418 and below**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **0.5 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:

Worldwide

II. PURPOSE:

TSB 83-020 A supersedes TSB 83-020. The purpose of re-releasing this TSB is to update the system serial number effectivity. The purpose of this TSB is to notify the field of a possible safety hazard regarding the bracket that holds the Sampling Syringe Assembly. The edges of the bracket are sharp and could possibly cause a hazard during replacement of any part of the Sampling Syringe Assembly. The bracket specifications are being rewritten to include machining the edges to a smooth finish. The Sampling Syringe brackets on instruments indicated (**1427, 1423, 1422, 1421, and 1418 and below)** will have to be reworked in the field.

The present bracket must be reworked immediately as described.

III. ADMINISTRATIVE NOTES:

Note: This TSB should be marked on the modification control sticker as complete when the bracket is reworked.

IV. SPECIAL TOOLS:

Tools required:

2 Phillips screwdriver
File

V. PARTS:

REPLACED PARTS:
None required

COMPATIBILITY:
N/A

VI. PROCEDURE:

MODIFICATION STEPS:
Time Required:

Modification time = 0.2 hour
Validation time = 0.3 hour

Total time = 0.5 hour

1. Perform the instrument shutdown procedure if the instrument is powered on. (From the main screen, press F2 SHUTDOWN. After the screen displays "Shutdown is complete. You may now turn off the power," turn the main power switch off.)

2. Access the Sampling Syringe Assembly by opening the Processing Center cover and the Sampling Syringe Access panel.

3. Remove the Sampling Syringe Assembly from the Sampling Syringe Assembly bracket. There are four Phillips screws holding the syringe assembly to the bracket. (It is not necessary to remove any tubing or the valve.) Set the Sampling Syringe Assembly aside on the RV Carousel.

4. Remove the Sampling Syringe Assembly bracket. There are 2 screws holding the bracket to the Sampling Center plate. Set the screws and grounding wire aside.

5. Place the Sampling Syringe Assembly bracket on an appropriate work area for filing. DO NOT PLACE THE BRACKET ON THE AxSYM analyzer. The bracket will scratch other surfaces and the filing will produce metal shavings. Use your judgement to determine a proper work area. If necessary, remove the bracket from the laboratory for filing.

6. Use a file to smooth out the edges of the Sampling Syringe Assembly bracket. The pointed edges should be filed on all sides of the bracket except the bottom edge that mounts to the Sampling Center plate. Be sure to file both sides of each edge. In addition, the front points where the top and front edges meet should be filed. (After filing, the top edges should slant down to meet the front edges.)

7. After all the edges of the Sampling Syringe Assembly bracket have been filed, re-install the Sampling Syringe Assembly bracket and the Sampling Syringe Assembly. Be sure to re-install the grounding strap between the bracket and syringe assembly.

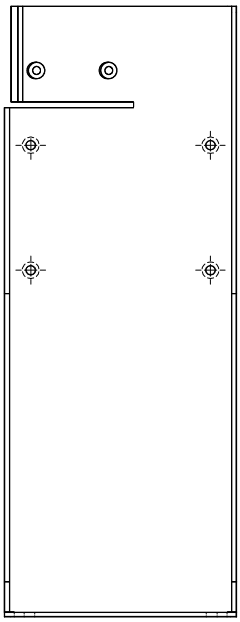
CHECKOUT:
After the bracket, syringe assembly and ground strap have been re-installed, perform the following:

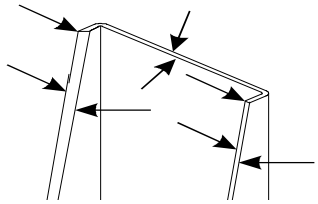
1. Perform a flush of bulk solutions 1 and 3.

MODIFICATION CONTROL STICKER UPDATE:

1. Mark the modification control label to indicate completion of TSB # 83-020A.

2. At the completion of this modification perform a Total Service Call.





File/smooth the edges of all sides of the bracket.

END OF DOCUMENT
END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
TEN LITER SCALE

TSB#: **83-019A**

ORIGINATOR: **David Otterman**
APPROVED: **Mark Slater 6/2/94**

PRODUCT:
AxSYM® (83)

REF. ECO:

*The following instruments have this TSB in place - 1379, 1380, 1381

This Mark > indicates were the changes have been made.

IMPLEMENTATION:	TSB Part/Kit #: **>64717-101**	Upgrade Time: **0.5 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **04-MAY-94**	Validation Time: **0.5 Hr.**
Instruments Requiring Modification: **<1476***	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.0 Hr.** ****NOTE**** **The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
> TSB 83-019A will supersede TSB 83-019 due to the part number correction for the kit.

The purpose of this TSB is to inform the field of a false "Solution 4 Empty" message when 2 liters are still in #4 bottle. This message should only appear when there is less than 1000 ml of solution left in the #4 diluent container. At 2 liters of solution the "Inventory" messageshould appear. To correct this problem we are changing the counter-weight and washers on the #4 solution 10 Liter Scale Assembly.

III. ADMINISTRATIVE NOTES:
N/A

IV. SPECIAL TOOLS:
Phillips Screwdriver
Allen Wrench 5/64

V. PARTS:

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

VI. PROCEDURE:

MODIFICATION STEPS:
Time Required:

Upgrade Time: 0.5 Hr.
Validation Time: 0.5 Hr

Total Mod Time: 1.0 Hr

1. Remove bulk solution #4 from the scale (take precautions not to contaminate the bottle).

2. Using existing holes in the platform, remove the two Phillips screws that hold the assembly to the floor of the instrument (RR 16 in the Service Manual).

3. Remove the screws that hold the black plastic stops in place and discard both.

4. Remove the two shoulder screws, one on each side, that hold the platform to the pivot point of the assembly (Refer to Figure 1).

5. Install the new bellville washers (P/N 14533-002) under the head of the existing shoulder screws, then replace the screws into that pivot point (Refer to Figure 1). This will remove any side to side movement of the platform.

6. Remove the screw and washer that hold the old counterweight in place. Save this screw and washer. Discard the old counterweight.

7. Install the new counterweight (P/N 38226-102) using the screw and washer from the old weight (Refer to Figure 2).

8. Tighten this screw to hold the new weight securely. Ensure the weight is straight and does not move side to side.

9. Ensure the flag on the platform enters the trip sensor cleanly.

CHECKOUT:

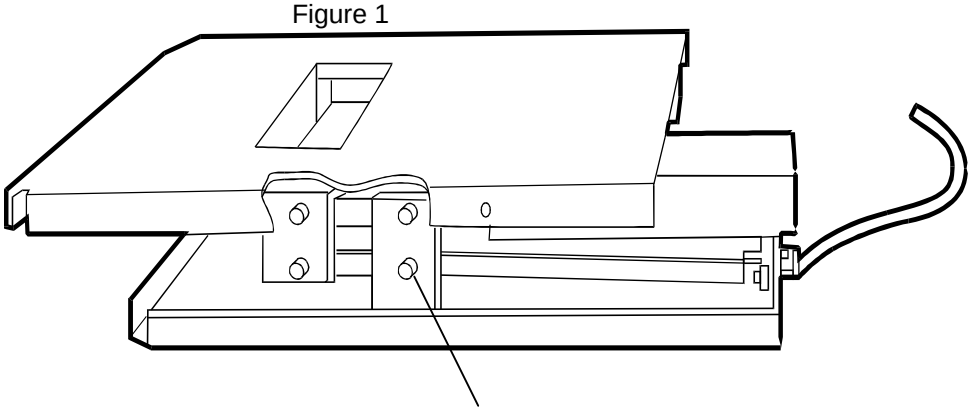
1. Highlight Inventory and then Bulk Solutions (F4) and ensure the screen indicates empty in order to verify the trip/flag sensor.

2. Put a box of solution #4 on the scale assembly and verify the flag is not blocking the sensor.

MODIFICATION CONTROL STICKER UPDATE:

1. Mark off TSB controls mod sticker number 19.

Figure 1



Pivot point were shoulder washers are installed
Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

Where screw and washer secure the counterweight

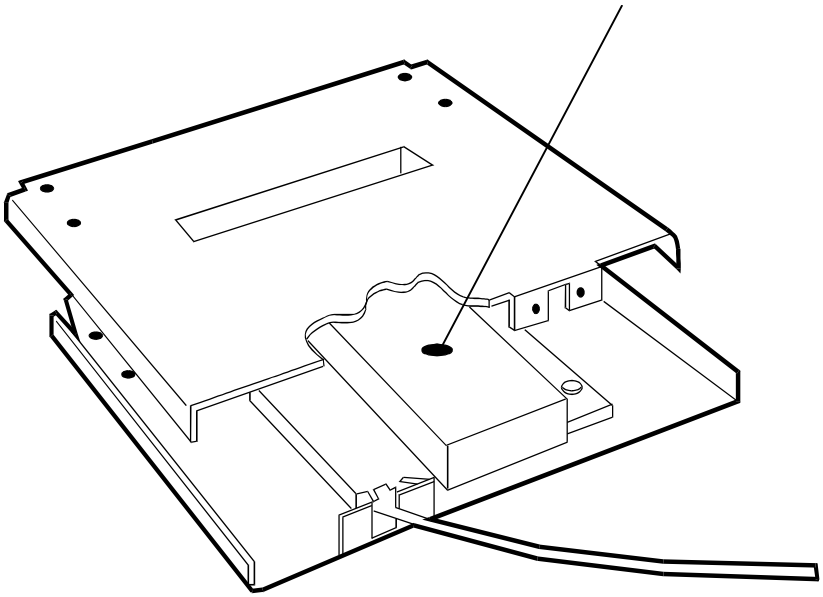


Figure 2

END OF DOCUMENT
END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
MUP/QUAT/TAB WASH PUMP MOTOR CABLE

TSB#: **83-018**

ORIGINATOR:
EMILE DIOU

PRODUCT:
AxSYM® (83)

APPROVED: **Jack B. Hall 3/24/94 (signature on file)**

REF. ECN: **VTX-2743**

IMPLEMENTATION:	TSB Part/Kit #: **4-37215-02**	Upgrade Time: **Hr 1**
☐ **Immediate** ☐ **Next Service Call** ☒ **Next Failure** ☐ **Optional**	TSB Effectivity/ Part(s) Availibility: **25-MAR-94**	Validation Time: **Hr .25** Total Mod. Time: **Hr 1.25**
Instruments Requiring Modification: **Serial Number ≤ 1330**		

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

I. Distribution:
Worldwide

II. General

A. Purpose:
NOTE: This cable will need to be replaced only if the QUAT pump fails and if the replacement pump is the new style.

The purpose of this TSB is to inform the field of a change to the length of the cable going to the QUAT pump. If the QUAT pump fails on an instrument and is replaced with a new style pump (mounted in the pump bracket at a 45 degree angle to improve the serviceability to the tubing connections) then the power cable will need to be replaced. If the pump is replaced with the old style pump, then the power cable does not need to be replaced. The cable manufacturer has added 1.5" to the cable which is required for the new style pump. The cable(W121) supplies power from the power backplane (at connector P10) to all three of the small volume pump motors.

B. Administrative Notes:
USA: This TSB should be closed out in Field/Watch as follows: SC=03 TC=18 RC=93
This cable will be added to the FSR kit and parts will be issued through field watch.

INTERNATIONAL: The International Service Manager should send forecast requirements for the cable to their responsible logistic organization. Please reference TSB 83-018 on forecast requirements.

C. Time Required:
Modification time = 1 hour
Validation time = 15 minutes
Total time = 1 hour, 15 minutes

D. Tools required:
2 Phillips screwdriver

E. Parts:
Part Description	Catalog number	Quantity

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

MUP/QUAT/TAB WASH motor cable 4-37215-02 1

III. Procedure:

Shut down and power off the instrument.

1. Disconnect the motor connection (cable W121) on each pump motor.
2. Remove the rear panel, behind the instrument, to gain access to the power cardcage backplane.
3. Disconnect connector P10 (cable W121) from the power cardcage backplane.
4. Remove the W121 cable.
5. Install the new cable by routing the same way as the old cable came off.
6. Tie wrap the new cable in place.
6. Connect the motor connection to each pump motor.

Validation

1. Power the instrument back on and ensure it completes a successful startup (F3).
2. Enter Maintenance/Diagnostic Control/ Pumps and Valves and ensure that each pump find home.
3. Perform 1 flush on each pump and verify fluid movement.
4. Mark off control mod sticker 18 and perform a total service call.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
REAR CABLE ROUTING

TSB#: **83-017**

ORIGINATOR: **DAVID OTTERMAN**
APPROVED: **Mark Slater 4/27/94**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **NONE**	Upgrade Time: **1.0 Hr.**
○ Immediate ● Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **27-APR-94**	Validation Time: **1.0 Hr.**
Instruments Requiring Modification: **Serial Number 1017, 1020, 1046, 1050, 1091, 1103, 1121, 1135, 1144, 1158, 1173**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **2.0 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:

Worldwide.

II. PURPOSE:

The purpose of this TSB is to eliminate possible noise problems due to AC and digital cables bundled together (Please note Instrument Serial Numbers in the Implementation Section).
The correct routing for cabling should be: All AC cables are to be routed through the left channel behind the back panel while all logic (DC-low voltage) cables are routed through the right channel.
The aim is to reduce the chance of false triggering of signals, misreading of encoders and interfering of RS232 interrupt signals.

III. ADMINISTRATIVE NOTES:

Depot Stock: NONE
FSE Stock: NONE

USA only: NONE
Parts Shipped to FSE/FSR per IRL: NONE

This TSB should closed out in Field Watch as follows: SC=03 TC=17 RC=93

IV. SPECIAL TOOLS:

Phillips Screw driver

V. PARTS:

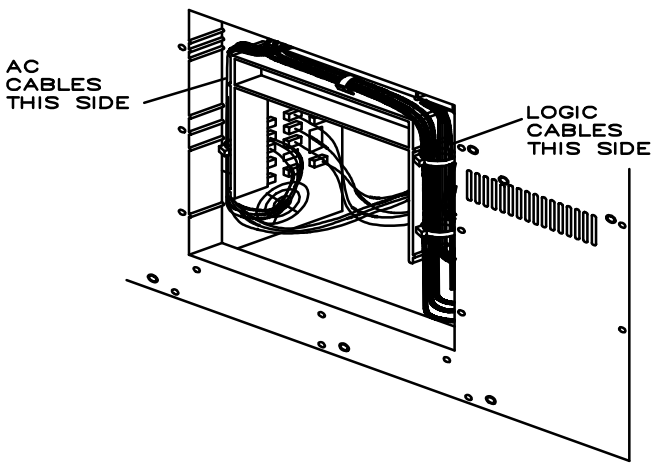
REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

VI. PROCEDURE:

MODIFICATION STEPS:
Time Required:
1 HOUR

1. Power down in the instrument using the "Shutdown" procedure.
2. Remove the back sheet metal panel (6 Phillips screws).
3. Check the cables inside the left channel. They should consist of:
   J-21 - MUP heater block cable.
   J-9 - Diluent heater block cable
   J-13 - Air heater assembly
   W-44(3) - Temperature control lines to all three heater blocks.
4. All other cables should be moved to the right channel.
5. Changing the cabling configuration will require opening the cable clamps.
6. After arranging the cables properly, close the cable clamps around them.
7. Replace the sheet metal back panel onto the instrument. Allow the panel to flatten, not pinch, the cabling.



BACK PANEL OF INSTRUMENT

CHECKOUT:
N/A

MODIFICATION CONTROL STICKER UPDATE:
1. Perform a Total Service Call on the instrument and mark off -017 on the control mod sticker.

END OF DOCUMENT
END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
OPTICS REGULATOR BOARD

TSB#: **83-016**

ORIGINATOR:
Jack Hall

PRODUCT:
AxSYM® (83)

APPROVED: **Mark Slater (signature on file)**

REF. ECN: **VTX-2713**

IMPLEMENTATION:	TSB Part/Kit #: **4-37645-02**	Upgrade Time: **.5 Hr.**
☐ **Immediate** ☐ **Next Service Call** ☒ **Next Failure** ☐ **Optional**	TSB Effectivity/ Part(s) Availibility: **21-MAR-94**	Validation Time: **.5 Hr.** Total Mod. Time: **1.0 Hr.**
Instruments Requiring Modification: **Serial Number ≤ 1200**		

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

I. Distribution:

International and USA.

II. General

A. Purpose:

A problem with the alignment of the optics regulator board has been identified. All boards in stock at depots and in field service parts kits will be returned to Dallas for rework. All boards in systems will be changed out on a next failure of the board.

B. Administrative Notes:

USA; This TSB should be closed out in Fieldwatch as follows: SC=03 TC=z7 Rc=93
To upgrade the Optics Regulator Boards, Catalog Number 4-37645-01 in your kit, open a 0DEF call and show usage of this part. Then return the part through normal channels. You will be replenished with 4-37645-02.

INTERNATIONAL: Please return all Optics Regulator Boards, 3-37645-01 for 100% credit. Send forecast requirements through World Wide Logistics for 4-37645-02 boards.

C. Time Required:

1.0 Hr.

D. Tools required:

Standard FSR Tool Kit

E. Parts:

Part Description	Catalog number	Quantity
Optic Regulator Board	4-37645-02	1

III. Procedure:

1. Power down the AxSYM in accordance to the shutdown procedure.
2. Remove the optics regulator board located in slot 5 from the VME card cage.
3. Install the (4-37645-02) Optics Regulator Board.
4. Perform an FPIA and a MEIA Optics initialization.
5. Perform a Total Service Call.
6. Mark the TSB control sticker for TSB 83-016.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Double Insulated Power and Heater Cables

TSB#: **83-015**

ORIGINATOR: **Ron Elston**
APPROVED: **Mark Slater 5/18/94**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **64680-101**	Upgrade Time: **0.8 Hr.**
○ Immediate ○ Next Service Call ● Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **27-MAY-94**	Validation Time: **0.7 Hr.**
Instruments Requiring Modification: **S/N 301 - 1300**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.5 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
Worldwide

II. PURPOSE:
The purpose of this TSB is to notify the field of a new modification made to the power and heater cables. Two modifications were required of the cables to meet Japanese and European market requirements. KOSEISHO Agency required lower emissions and VDE required that cables be double insulated. The new cables will have ferrite beads added. This is the first of a two step process to suppress noise. Back shells are also added at W44J9, W44J21 and W45J13 to meet the VDE requirement for double insulation.

Instruments 1000 - 1300 meet the Japanese and European requirements through other techniques. This TSB will need to be performed if W44 or W45 is removed from its current (tie wrap) location during troubleshooting or if the cables need to be replaced. If either of these cables is removed, both cables are to be replaced to ensure double insulation (see details in Section III. Procedure).

III. ADMINISTRATIVE NOTES:
Note: This TSB should be marked on the modification control sticker as complete only if cables W44 and W45 are replaced.

IV. SPECIAL TOOLS:
2 Phillips screwdriver

V. PARTS:

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

VI. PROCEDURE:

MODIFICATION STEPS:
Time Required:

Modification time = 0.8 Hr.
Validation time = 0.7 Hr.

Total time = 1.5 Hr.

A. Serial Number 301 - 536

Note: Instruments 301 - 536 can be modified to meet the VDE requirement of double insulation by following the tie wrap steps outlined below in part B. However, if W44 or W45 need to be replaced for any reason, both cables should be replaced. Instrument configuration should be verified before starting this TSB. It should first be determined if the new cables will be compatible with older system parts. Additional parts may be necessary before this TSB can be installed
(Ref. TSB 83-012).

B. Serial Number 1000 - 1300

Note: Instruments 1000 - 1300 meet Japanese and European requirements through other techniques. This modification will only need to be performed if cables W44 or W45 is removed from the current tie wrapped positions. If either cable is removed from the tie wrap, both cables (W44 and W45) should be either tie wrapped to the original position or replaced.

Tie Wrap Cables to Meet Double Insulation:

This procedure should be performed using cable tie 14277-100, 14277-105, or an equivalent cable tie approximately 4.1".
Connectors J2, J6 and J21 are located at the power back plane.

1. Harness the following cables together with a tie wrap. Tie wrap should be placed 3 +/- 1.0 inches from the back of the J2 connector shell (point at which wire enters connector).
   - J3 of W49,
   - J12 of W150,
   - J17 of W37, and
   - J2 and J4 of the card cage harness.

2. Harness the following cables together with a tie wrap. Tie wrap should be placed 1 +/- 0.5 inches from the back of the J6 connector shell (point at which wire enters connector).
   - J19 of W50, and
   - J6 of the card cage harness.

3. Harness the following cables together with a tie wrap. Tie wrap should be placed 3 +/- 1.0 inches from the back of the J21 connector shell (point at which wire enters connector).
   - J9 of W44,
   - J13 of W45, and
   - J21 of W44.

CHECKOUT:
If the cable harness' are replaced perform the following:

1. Perform a flush of bulk solutions 1 and 3.
2. Perform a Temperature check.
3. Perform a Fluidics check.
4. Perform a Mup check.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

5. Perform an assay run.

MODIFICATION CONTROL STICKER UPDATE:

1. Mark the modification control sticker.

2. At the completion of this modification perform a Total Service Call.

END OF DOCUMENT
END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
INSTALLATION OF EPROM ON THE CPU BOARDS

TSB#: **83-014A**

ORIGINATOR:
DAVID OTTERMAN

PRODUCT:
AxSYM® (83)

APPROVED: **Mark Slater 4/4/94 (signature on file)**

REF. ECN: **VTX-2707**

IMPLEMENTATION:	TSB Part/Kit #: **37706-105** **37706-106**	Upgrade Time: **30 Minutes**
☒ **Immediate**		Validation Time: **10 Minutes**
☐ **Next Service Call**	TSB Effectivity/ Part(s) Availibility: **31-MAR-94**	Total Mod. Time: **40 Minutes**
☐ **Next Failure**		
☐ **Optional**		
Instruments Requiring Modification: **Serial Number ≤ 1355 ⇐**		

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

I. Distribution:

International and USA.

A special kit (64665-101) has been assembled to get all of the parts for the TSB's required at install to the field at one time. The EPROMs (P/N 64663-101) are in kit 64665-101. The following items are also in the kit:

4-64625-01 Active Terminator (TSB 83-011)
LN 5B80-01 1.2 Software Disc (TSB 83-010)

II. General

A. Purpose:

This set of EPROMS are to be installed on all CPU boards (changing the dash number of the catalog number to 4-37333-02). This ensures compatibility on other manufacturers floptical drives, if the need arises due to obsolescence or availability. In addition, upon boot up a complete diagnostics for all 16 Mb RAM will be performed. It provides the field with a single configuration which simplifies the modification process should a floptical change become necessary.

B. Administrative Notes:

Depot Stock : All CPU boards will be identified by the lower ear tab, denoting a -102. This indicates that Rev. 2.1 PROMS have been installed on this board. Depot Stock CPU boards (4-37333-01) can be updated to 4-37333-02 by ordering P/N64663-101. This will include the matching EPROMs.

U.S. Only: This TSB should be closed out in FieldWatch as follows:
SC=03 TC=14 RC=93

C. Time Required:

Modification Time:	**Validation Time:**	**Total Mod. Time:**
30 Minutes	10 Minutes	40 Minutes

D. Tools required:
Flat Blade Screwdriver

E. Parts:

Part Description	**Part Number/Catalog number**	**Quantity**	
CPU EPROM Upgrade kit	64663-101	1	
EPROM U1 (REV. 2.1)	37706-105	1	In Kit
EPROM U15 (REV. 2.1)	37706-106	1	In Kit

III. Procedure:

1. Perform a proper Shutdown of the instrument
2. With the anti-static wrist strap in place remove the CPU board from slot 1 of the VME card cage.
3. Remove the two EPROMS from sockets U1 (Label will be 37706-103, U1) and U15 (Label will be 37706-104, U15) on the CPU board (refer to figure 1 for location).
4. Install the -105 (REV 2.1) EPROMS in socket U1 and -106 (REV 2.1) into socket U15 in the same location where the old EPROM's resided. (note proper pin orientation).
5. Install the CPU board back into the VME card cage.
6. Slide out the Motorola® ear tab on the end of the board and turn it over.
7. Write -102 on this tab. You have now just created a 4-37333-02 CPU board.
7. Turn the instrument power on.
8. Ensure the instrument boots up with no problems
9. Discard the old EPROMS.
10. Mark off Mod Control sticker number 14.

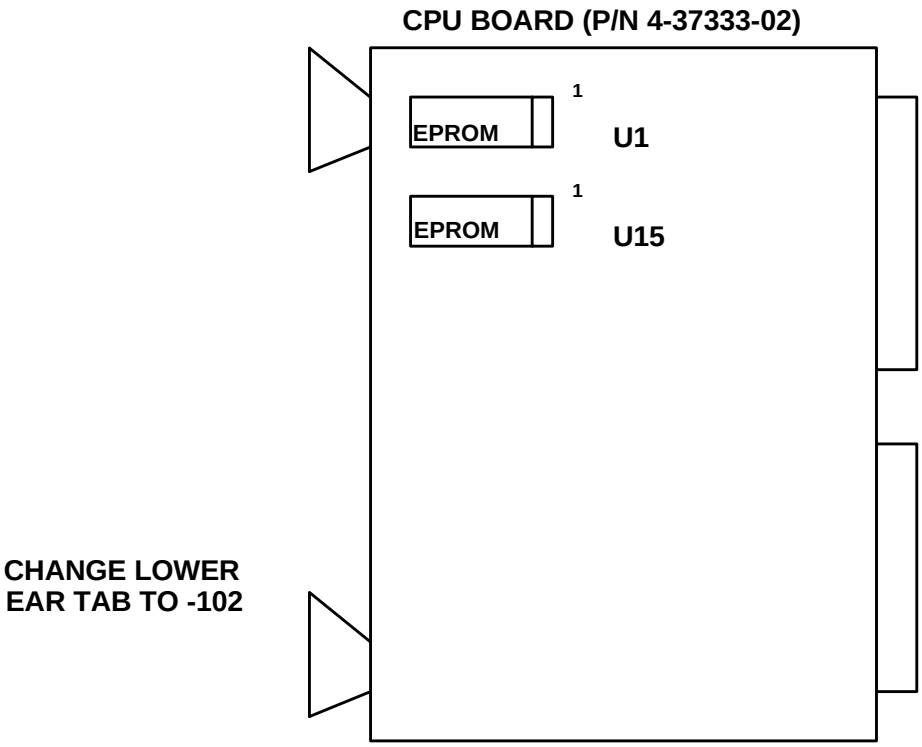


Figure 1

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
CPU REV. B BOARDS

TSB#: **83-013A**

ORIGINATOR: **DAVID OTTERMAN**
APPROVED: **David Otterman for Mark Slater 6/28/94**

PRODUCT:
AxSYM® (83)

REF. ECO:

IMPLEMENTATION:	TSB Part/Kit #: **4-37333-02**	Upgrade Time: **0.5 Hr.**
● Immediate ○ Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availability: **31-MAR-94**	Validation Time: **1.0 Hr.**
Instruments Requiring Modification: **Serial Numbers ≤ 1355**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: **1.5 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

I. DISTRIBUTION:
WORLDWIDE

II. PURPOSE:
Please discard TSB 83-013 and replace it with TSB 83-013A.

Due to lock-ups during boot up we will have to upgrade all Rev 42 B. CPU boards (P/N 4-37333-01). A 47 pF capacitor is installed on an attached board. This board is soldered on the CPU board at connector P2. This attached board will cover all 9 controls' lines at P2. These lines are the signals coming back from the SCSI interface port. This will filter out the electrical noise that creates the lock ups. REV 42A boards are not affected.

III. ADMINISTRATIVE NOTES:

USA only: This TSB should be closed out in Field/Watch as follows:
SC=03 TC=13A RC=93

Depot Stock: Please have all REV. B CPU boards placed in an anti-static container and returned to Dallas through normal channels for rework.

INTERNATIONAL: Please return all REV. B CPU boards (in anti-static containers) to Dallas for 100% credit per RMA procedures.
Send forecast requirements through Worldwide Logistics. Please reference TSB 83-013A.
Catalog Number 4-37333-01, REV 42 A boards are not affected.
Please return 4-37333-01, REV 42 B boards
This does not affect REV. 42C boards (P/N 4-37333-02).

Part Description	Part Number/Catalog Number	Quantity
NEW - REV. 42B CPU (With attached board at P2) or REV. 42C CPU	4-37333-02	1

IV. SPECIAL TOOLS:
Small Phillips screw driver

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

V. PARTS:

REPLACED PARTS:
N/A

COMPATIBILITY:
N/A

VI. PROCEDURE:

MODIFICATION STEPS:
Total Time Required: 1.5 HOURS

NOTE: Before working with this board ensure you are wearing static discharge protection. These boards are extremely static sensitive and all static discharge procedures must be adhered to.

1. Power down the AxSYM system in accordance to the shutdown procedure.
2. Remove board 1 from the VME card cage.
3. Examine the solder side of the board and look at the REV. level on the board (It should have 42B or 42A located next to P1 - Refer to Figure 1).
4. If this is a Rev. 42B board without the attached 47pf board it must be replaced with a 4-37333-02 (Rev. 42B or 42C) board with an attached 47pf board. Rev. 42A boards are not affected.

NOTE: The new 2.1 EPROMS is what changes the part number of the CPU board to a 4-37333-02. The new 4-37333-02 boards have been modified and can be used. These boards can be identified by the addition of a small second board attached at the connector P2.
Only 4-37333-01 42B without attached 47pf boards need to be replaced.

5. After instrument warm-up has completed, run the assay described in the installation procedure.

CHECKOUT:

MODIFICATION CONTROL STICKER UPDATE:

1. Mark off TSB controls mod number 13 for both REV. 42A and REV. 42B boards.

NOTE: If during boot up an error **32** is encountered there could be a compatibility problem between the CPU board and the Hard Drive. Refer to ISA 83-033.

OK	BAD
16 Meg CPU Boards with any of the below Revisions Rev 42A Rev 42B with P2 Paddle Board Rev 42C	All 8 Meg Boards 16 Meg CPU Boards Rev 42B without P2 Paddle Board

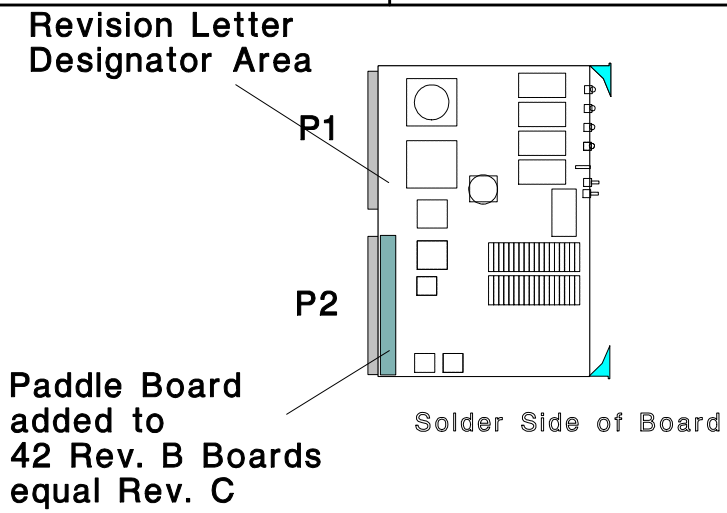


FIGURE 1

END OF DOCUMENT
END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
ACTIVE TERMINATORS

TSB#: **83-011**

ORIGINATOR:
DAVID OTTERMAN

PRODUCT:
AxSYM® (83)

APPROVED: **Mark Slater 3/31/94 (signature on file)**

REF. ECN: **VTX-2715**

IMPLEMENTATION:	TSB Part/Kit #: **4-64625-01**	Upgrade Time: **10 MINUTES**
☒ **Immediate**	TSB Effectivity/ Part(s) Availibility: **31-MAR-94**	Validation Time: **10 MINUTES**
☐ **Next Service Call**		Total Mod. Time: **20 MINUTES**
☐ **Next Failure**		
☐ **Optional**		
Instruments Requiring Modification: **Serial Number < 1251**		

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

The following instruments already have this Active Terminiator installed by the factory.
1213, 1226, 1228, 1229, 1234, 1237, 1241, 1242, 1243, 1245, 1246, 1247, 1248, 1251

I. Distribution:

International and USA.

A special kit (64665-101) has been assembled to get all of the parts for the TSB's required at install to the filed at one time. The Active terminator (4-64625-01) is in kit 64665-101. Also in the kit are the following items:

LN 5B80-011.2 SOFTWARE DISC (TSB 83-010)
64663-101 EPROM KIT (TSB 83-014)

II. General

A. Purpose:

Due to lock-ups during boot up, the AxSYM analyzer will require an Active Terminator installed on the SCSI port located below the floptical drive. The problem Presents itself as a hard drive "lockup" in which the hard drive never completes a "READ" operation. The drive stops transferring the data in the "DATA IN" phase of the read operation with the green LED of the hard drive continously on.

This terminator will regulate the terminator voltage, normally reducing the effect of voltage interference throughout the bus line.

The increase in terminator voltage causes a similar increase in current, which reduces reflections due to impedance mismatches. Noise margins are improved as well.

The new Active Terminator will have a green LED on the cover indicating power to the terminator. The present terminator is passive and has no LED on the cover.

B. Administrative Notes:

USA: This TSB should be closed out in FieldWatch as follows: SC=03 TC=11 RC=93 Field Service Logistics will distribute part number 64665-101 based on IRL.

International: Send forecast requirements for P/N64665-101 through World Wide Logistics.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

C. Time Required:
Modification time = 10 minutes
Validation time = 10 minutes
Total time = 20 minutes

D. Tools required:
None

E. Parts:

Part Description	Catalog number	Quantity
Upgrade Kit	64665-101	1
Active Terminator	4-64625-01	1

III. Procedure:

1. Power down the instrument in accordance to the proper shutdown procedure.
2. Open the hard drive door.
3. Remove the present passive terminator from the SCSI port and replace it with the new Active Terminator (the terminator will have a green LED on the cover indicating power to the terminator, refer to figure 1). Properly dispose the Passive Terminator.
4. Power the instrument back on.
5. A successful boot up with no lockups indicates the system is working properly.
6. Mark off number 11 on the TSB control mod sticker.
7. Perform a Total Service Call on the instrument.

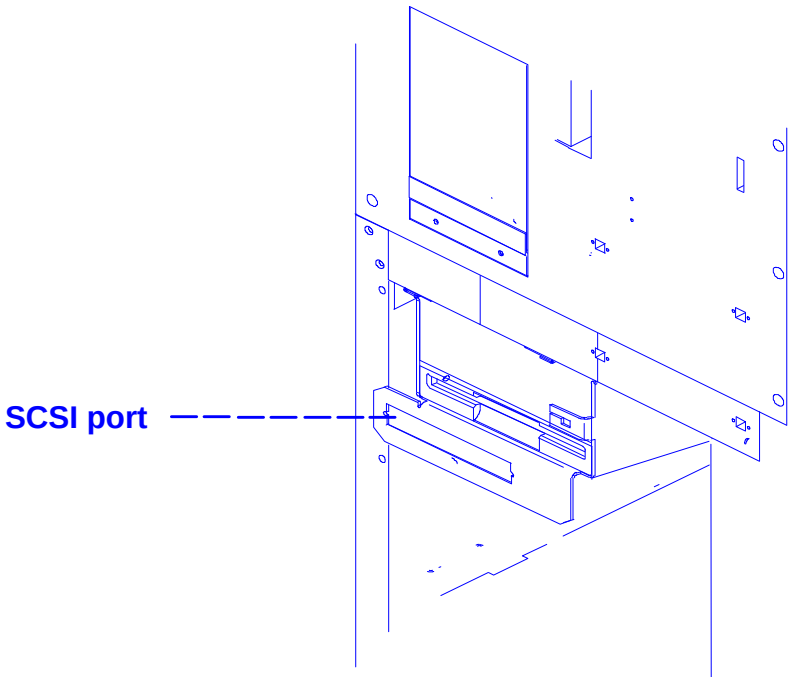


FIGURE 1

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Software Version 1.20

TSB#: **83-010B**

ORIGINATOR: **Rod Defibaugh**
APPROVED: **Mark Slater 7/11/94**

PRODUCT:
AxSYM® (83)

REF. ECN: **VTX-2707**

IMPLEMENTATION:	TSB Part/Kit #: **LN 5B80-01**	Upgrade Time: *****1.0 Hr.**
● Immediate ○ Next Service Call ○ Next Failure ○ Optional	TSB Effectivity/ Part(s) Availibility: **31-MAR-94**	Validation Time: *****1.5 Hr.**
Instruments Requiring Modification: **All AxSYM Systems 300 thru 1354*** ***Except for system 1288**	**TSB Tracking by Serial # required (IMMEDIATE TSB's ONLY)** ○ YES ● NO	Total Mod. Time: *****2.5 Hr.** ****NOTE** The instrument must be at TSB Level n/a prior to performing this TSB.**

*****NOTE: Instruments with 3.52 or 3.61 software will require a 3.5 Hr. total modification time.**

I. Distribution:

International and USA

II. General:

REVISION "A" **All edits are indicated by a ⇒ symbol.**

Two issues were discovered after the initial release of TSB 83-010.

1. **Reagent Records of previously scanned reagent packs would remain in the system with the assay name of UNKNOWN.**
   - ➔ **A Technical Bulletin #16 was distributed to Worldwide Customer Support.**
2. **In procedure C step 4, the MEIA Standard value was edited after the MEIA Station and Verification procedures were performed.**

REVISION "B" **All changes are indicated by a ➔ symbol.**

To address confusion related to the identification of a properly configured CPU board an illustration, Figure 1, was added. All TSB Text related to CPU identification text has been changed to refer the FIGURE 1.

A U.S. Mail Address has been added for return of Version 1.0 diskettes and TSB installation tracking information.

NOTE: It is required as part of this TSB to insure that all AxSYM® software version 1.0 diskettes are removed from all world locations.
All AxSYM Systems are to be upgraded to Version 1.20.

A. Purpose:
The following changes were made in Version 1.20:

1. Correction to the % CV calculations used in the 2 point Master Calibration. The launched assays which are affected are: USAB, FT4, T3. At this time a stop shipment has been placed on all assay's Master Calibrators (2 point).
2. The selectable reportable digits for each assay has been limited to a value no less than the assays default value.
   NOTE: This value must be checked and modified as part of this TSB and will be covered in the procedure section.
3. A compensation has been made for the deflections that occur during the homing sequence of both the Reagent Carousel Motor magnetic poles and its pinion gear.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

To correct these errors, a new AxSYM System Software Version 1.20 (LN 5B80-01) has been released.

SYSTEM CONFIGURATION:

On systems with serial number < 1000, the CPU board must be a 16 Mb version (C/N 4-37333-01).
(Effectivity for serial number 300 -514)

This software version can be modified to except older version of Reagent Actuators (Little Feet) P/N 37236-107 and Sample Barcode Reader P/N 37267-104 using USA 83-035.

TSB IMPLEMENTATION:

This is an Immediate TSB.

- As an immediate, the AxSYM Business Unit will be responsible for all Parts, Labor, Travel and Expenses.
- All installed systems with serial number 1000 and greater; must be upgraded within 19 calendar days of receipt of software.
- All **other systems** with serial numbers greater than 1000; must be upgraded during installation.
- All other Pre-production systems must be upgraded prior to July 15 '94.

B. Administrative Notes:

TSB UPGRADE TRACKING

- As part of this TSB, the AxSYM Customer System Engineering Group in Dallas and your area Field Service Administration are required to track the TSB installation status of each system.
- As stated above, a hold has been placed on all 2 point Master Calibrations. It will not be possible to ship reagents packs with 2 point assays calibrations to your country until your associated area distribution center has received firm conformation that all systems in your country have upgraded.
- **It is a requirement that the following process BE followed for each system:**

1. After Version 1.20 has been properly installed, two copies of the **CONFIGURATION/ INSTALLATION** screen must be printed. This screen will display the current system software.
   Print the following additional information on the above printouts:
   - System Serial Number, Name and Address of Account
   - Printed FSR Name
   - Signed FSR Name
   - Print Date
   - Number of software version 1.0 diskettes found
2. Locate ALL Version 1.0 (P/N 38851-105) diskettes. Print the following information on each diskette.
   System Serial Number, Name and Address of Account
   - TSB 83-010
   - Printed FSR name
   - Signed FSR name
   - Print Date
3. Send a copy of the printout and the version 1.0 diskette to following address using the envelope that the 1.20 software was received in. Use priority mail or the international shipper that is included in the upgrade kit. International Only: Use the shipper if you are not returning the diskette to your field service administration office:

➔

Mark Slater M.S. 5-2
Abbott Laboratories-Diagnostic
1875 Walnut Hill Lane
Irving, TX 75038
FAX: 214-518-7354

VIA U.S. Mail
Mark Slater M.S. 5-2
Abbott Laboratories-Diagnostic
P.O. Box 152020
Irving, TX 75015-2020

4. Send the second copy to your area Field Service Administration.

Note: No diskettes were shipped with the following instruments: 1109, 1111, 1112, 1117, 1119, 1122, 1123, 1125 and greater.

PART ORDERING

NOTE: A special kit (P/N 64665-101) has been assembled to get all of the parts for the TSB's required at install to the field at one time. The Version 1.20 software disk (LN 5B80-01) is in the kit P/N 64665-101. Also in the kit is the following items:

P/N 64625-101 Terminator (TSB 83-011)
P/N 64663-101 EPROM Kit (TSB 83-014)

To insure that our world wide customers needs are properly addressed, the systems must be upgraded in the following priority order.

1. All installed systems with serial number 1000 and greater; must be upgraded within 19 calendar days of receipt of software.
2. All other systems with a serial number 1000 and greater. To be upgraded at instrument installation.
3. All other Pre-production systems must upgraded prior to July 15 '94.

Note: Version 1.20 requires the 16 Mb CPU installed.

US: AxSYM Install Kit P/N 64665-101 containing Software (LN 5B80-01) Distribution will be coordinated by the Customer System Engineering Group in Dallas. This TSB should be closed out in Field Watch as follows: SC=03 TC=10 RC=93

INTERNATIONAL: Based on the system priority list above, each country must order the required number of Installation Kits (P/N 64665-101) from their area distribution center. The area distribution centers must order the required number of Installation Kits from the World Wide Logistics group in Dallas. To expedite the world wide upgrade process, please order the appropriate number kits required to implement the upgrade at the rate required to meet the implementation schedule.

PART RETURN

As stated above, each Version 1.0 software diskette must be tracked as it is removed from the field. The diskette and the printout must then be sent back to Mark Slater in Dallas using the method required for your country.

To facilitate the return process, the Version 1.0 Software (P/N 38851-105) has been added to the RMA list. Before returning to Dallas for credit, insure that all software copies are marked as indicated in the TSB TRACKING SECTION of this TSB.

C. Time Required:

Installation without Hard Drive Format
- Modification Time: 1.0 Hr.
- Validation Time: 1.5 Hr.

Installation with Hard Drive Format
- Modification Time: 2.0 Hr.
- Validation Time: 2.5 Hr.

D. Tools required:
- Standard Philip #1 screwdriver

E. Parts:

Part Description	List Number	Quantity
AxSYM Version Software 1.20	LN 5B80-01	1
AxSYM Version Software 1.20 Addendum		1

III. Procedure:

Compatibility: (For systems serial number 300 - 536 only)

ASSAY SOFTWARE and SYSTEM DATABASE

- The data base files and assay disks for version 1.0 software are compatible with

version 1.20 software. However, the data base and assay files for **Clinical Versions 3.52 and 3.61 ARE NOT COMPATIBLE with Software Versions greater than 1.0.**

- Any 3.52 or 3.61 system or assay disks must be strictly controlled or destroyed. EXTREME CARE must be taken to ensure that these disks are **not** installed on the system after upgrade.

SYSTEM HARDWARE

Version 1.20 software is compatible with the current version of the following system hardware.

CPU Board w/16 Mb	C/N 4-37333-01
Reagent Actuator	C/N 4-37323-01
Sample Bar Code Reader	C/N 4-38548-01

- By using the modification information provided in USA 83-035 the following older system hardware can be used on Version 1.20 software. The installation and removal of these modified software files must be strictly controlled. It is not the scope of this TSB to address the release of these files.

  Reagent Actuator P/N 37236-107
  Sample Bar Code Reader by Symbol Technologies P/N 38548-102

  NOTE: In USA 83-035, the file changes related to software 3.7 can be applied to Version 1.20 software.

  NOTE: Check that the 16 Mb CPU has been installed. Software Versions greater than 1.0 will not run on systems with an 8 Mb CPU boards

➔ - CPU board identification: REFER TO FIGURE 1 on page 14.

OFF-LINE SOFTWARE

- Various AxSYM development groups require the use of OFF-LINE software.
- To interface with Version 1.20 software you must use OFF-LINE software 3.7.2.
- Contact the AxSYM Support Group in Chicago for the distribution of this OFF-LINE development software.

System Modification:

A. DETERMINE SYSTEM STATUS

1. Determine if the system has experienced any VERTEX SYSTEM ERRORS 0734 errors.
   - Ask the Operators and check customer maintenance records.
   - If a VERTEX SYSTEM ERROR 0734 **HAS** occurred, perform **SOFTWARE UPGRADE WITH HARD DRIVE FORMAT** (Procedure D).
   - If VERTEX SYSTEM ERROR 0734 **HAS NOT** occurred, perform SOFTWARE UPGRADE WITHOUT HARD DRIVE FORMAT (Procedure C).
2. Determine current version of system software.
   - From the **CONFIGURATION/ INSTALLATION** screen, check software version in the top right corner of the screen.
   - If the software is less than version 1.0, check the configuration of CPU board. Version 1.20 software requires a 16 Mb CPU board.

➔ For CPU board identification REFER TO FIGURE 1 on Page 14

B. LOCATE PREVIOUS SOFTWARE VERSIONS

- LOCATE ALL COPIES OF SYSTEM SOFTWARE VERSION 1.0 .

  NOTE: Every copy of system software version 1.0. must be found and returned to Dallas.

  NOTE: No diskettes were shipped with the following instruments: 1109, 1111, 1112, 1117, 1119, 1122, 1123, 1125 and greater.

C. SOFTWARE UPGRADE WITHOUT HARD DRIVE FORMAT

- **Use this procedure if the system's current software is Version 1.0 and has not experienced a VERTEX SYSTEM 0734 ERRORS.**

1. To verify the integrity of the data on the Hard Drive, perform a System Back Up.

⇒ 1-1. From the INVENTORY/ REAGENT PACKS/ REAGENT RECORDS screen, use PRINT key to print the records. Give this printout to the customer for their records.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

1-2. Locate the customer copy of System Software Version 1.0 (P/N 38851-105).
1-3. With Diskette Label facing you, locate the write protect device/switch located in the top left corner of the floptical diskette. Change the position of the switch to block the hole.
NOTE: If the write protect device is not blocked, the system will abort the Backup Utility and reboot the system.
1-4. Using a black marker, make a mark a single line through the label.
1-5. Insert the diskette into the Floptical Drive.
1-6. Logon as an FSE.
1-7. From the **Maintenance, System Backup** select Backup System to Floppy. This process will take approximately 25 minutes.
NOTE: If any system has any problem copying the files to the floptical disk the system will either abort the backup or lockup. **Should either condition occur, the hard drive must be formatted**. Perform the **SOFTWARE UPGRADE WITH HARD DRIVE (Procedure D).**
1-8. After the process is complete, remove the diskette. From the screen, select **OK**. The system will reboot.

2. Install Version 1.20 (LN 5B80-01) Software
2-1. From the **CONFIGURATION/ INSTALLATION** screen, select **INSTALL VERSION**.
2-2. Insert the new System Software Version 1.20 diskette (LN 5B80-01) into the floptical drive.
⇒ 2-3. On the screen, select **OK**. The system will re-initialze. (≈ 4 min.) Follow the screen prompts as indicated below:
At the first prompt select **"ENGLISH".**
At the second prompt, Select **"PERFORM SOFTWARE INSTALLATION ONLY".** (≈ 20 min.)
DO NOT FORMAT THE HARD DRIVE**.**
At the third prompt, remove the diskette and select **OK** The system will re-initialize. (≈ 4 min.)
2-4. Verify that the system boots to the Main Menu without an error. If an error occurs during component initialization, a resolution of that condition must be found.
NOTE: Software hardware compatibility modifications made by USA 83-035 **will not be saved** during this install version procedure.

3. Verify the software is properly loaded.
3-1. Select **CONFIGURATION/ INSTALLATION** screen. Check that the software version in the upper right corner indicates Version 1.20. If there is a problem with the software installation, perform **SOFTWARE UPGRADE WITH HARD DRIVE FORMAT (**Procedure D below).

4. Restore system configuration.
⇒ 4-1. There are two values of MEIA Standard in the field. Check the label of your standard to insure that the value in the **CONFIGURATION/ GENERAL** field **#25** is correct. Standard Lot # 74134M100 = 2554
74133M100 = 2587
4-2. From the main menu screen, select START-UP (F3)
4-3. Perform the following system calibrations:
a. Perform Sample and Process Probe Calibrations (CM-3 and 4)
b. MEIA Station Verification (CM-10)
c. MEIA and FPIA Verification Initializations (CM-11 and 12)
d. Sample Barcode Reader Calibration (CM-7)
NOTE: If system has a Sample Barcode Reader P/N 37267-104 modify the appropriate system files as directed by USA 83-035.
e. Reagent Pack Actuator Calibration (CM-5)
NOTE: If system has a Reagent Pack Actuator (Little Feet) P/N 37236-107 modify the appropriate system files as directed by USA 83-035.
4-4. From the **STORED RESULTS/ CALIBRATION REVIEW** screen, verify that the CALIBRATION/ TYPE for each assay pack is **STANDARD CALIBRATION**.
4-5. For EACH ASSAY, use the **CONFIGURATION/ ASSAY PARAMETERS** screen to check the value of the "Selected Result Decimal Places" (Item 46). Manually edit the field #46 for each assay, to insure that value is **not less than the default** minimum. For reference, use the assay reagent package insert.
NOTE: To prevent occurrences of result round off error, THIS FIELD MUST BE CHECKED.
⇒ 4-6. Locate all open reagent packs. Load the packs on the Reagent Carousel.
⇒ 4-7. Using the **INVENTORY/ REAGENT PACKS** screen, scan the carousel.
Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

⇒ 4-8. **After ALL open packs have been scanned**, from the REAGENT RECORDS screen, select and delete all packs with the name UNKNOWN.

5. Give copy of Version 1.20 (LN 5B80-01) to customer system's administration personnel.
6. Perform procedures F through I below.

D. SOFTWARE UPGRADE WITH HARD DRIVE FORMAT

Use this procedure if the system has experienced a VERTEX SYSTEM 0734 ERROR or it's current system software is less than Version 1.0.

NOTE: This installation process will not preserve any pre-existing system data.

- After the installation of this software, ALL system consumable levels, calibrations (robotic, temperature, optics and etc.) and all assays must be reinstalled and calibrated.

1. Print the following to document system current configuration:
   NOTE: To print a copy of the screens indicated below use the ALT-PRINT keys.
   1-1. Volumes of onboard consumable; print a copy of the **INVENTORY** screen.
   1-2. System general configurable parameters; print a copy of all **CONFIGURATION/ GENERAL** screens. (Items 1 to 37)
   1-3. Scan all open Reagent Packs and write the number of remaining test on each pack.
   ⇒ 1-4 From the INVENTORY/ REAGENT PACKS/ REAGENT RECORDS screen, use PRINT key to print the records. Give this printout to the customer for their records.
   1-5. Control Data. Printout of each control detail screen for every level of each assay. **CONFIGURATION/ CONTROL/ ASSAY/ CONTROL LEVEL/ CONTROL DETAILS**.
   1-6. Multicontrol Data. Printout of each control detail screen for every level of each assay. **CONFIGURATION/ CONTROL,**
   1-7. Assay Display Order; print a copy of the **CONFIGURATION/ ASSAY/ DISPLAY ORDER** screen.
   1-8. Panel Display Order; print a copy of the **CONFIGURATION/ PANEL DISPLAY/ ORDER** screen.
   1-9. Host configuration; print a copy of the **CONFIGURATION/ PORT** screen for **HOST.**
   1-10. Assay configurable parameters; for each assay, print a copy of the five assay parameter screens (1 to 107).
   1-11. Report Header; print a copy of the **CONFIGURATION/ REPORT HEADER** screen.
   1-12. Definition for each panel; print a copy to the **CONFIGURATION/ PANEL** screen for each panel.
   NOTE: On each panel printout, you must indicate (circle) the appropriate assays.
   1-13. Assay Ratio; print a copy of **CONFIGURATION/ RATIO** screen for each ratio.
2. Perform **a SHUTDOWN** F2. At the prompt, turn OFF system power.
3. Format the Hard Drive and Install Version 1.20 (LN 5B80-01) Software .
   3-1. Turn on the system power, monitor the displayed system boot sequence counter.
   NOTE: It is important that the disk is not in the drive as power is applied. The drive head has been known to damage the media of a disk.
   3-2. Before the system displays 23, insert the new Software Version 1.20 (LN 5B80-01) into the floptical drive.
   3-3. After the software has been loaded, a window will appear asking which language should be installed as the current language. (For Version 1.20, select English)
   3-4. It is part of the intent of this upgrade to perform a low level format on the hard drive media. This process will take approximately 25 minutes. YOU MUST **SELECT "FORMAT THE HARD DRIVE"** AS PART OF THIS SOFTWARE INSTALLATION.
   NOTE: If during the format procedure a FATAL DISK ERROR occurs, replace the hard drive.
   3-5. After the format is complete, the software installation will begin automatically. At it's completion, a window will appear, prompting the operator to remove the floptical disk from its drive. After removing the disk select **OK**. The system will reboot automatically completing the installation.
   3-6. After the software installation is complete, verify that the system boots to the Main Menu without an error. If an error occurs during component initialization, a resolution of that condition must be found.
   3-7. From the Main Menu, select **CONFIGURATION/ INSTALLATION** screen. Check that the software version in the upper right corner indicates Version 1.20.
4. Restore system to previous configuration.
   4-1. Using the previous printout and the **CONFIGURATION/ GENERAL** menu, set fields 1-37 to the previous settings.
   NOTE: There are two values of MEIA Standard in the field. Check the label of your

standard to insure that the value in field #25 is correct.

Standard Lot #	74134M100	=	2554
	74133M100	=	2587

4-2. Using the previous printout and **INVENTORY** screens, update the various inventories to the current levels.

4-3. Refer to the printout of the **CONFIGURATION/ ASSAY/ DISPLAY ORDER** screen and install a 1.0 version of each assay.

4-4. **Clinical Systems Only:**

Determine if the system has compatible hardware. Version 1.1 software requires the following hardware:

Reagent Actuator (Big Foot)	C/N 4-37323-02
Sample Barcode Reader (Micro Scan)	C/N 4-38548-01

USA 83-035 provides the information required to modify the software to be compatible with older system hardware.

Reagent Actuator (Little Feet)	P/N 37236-107
Sample Bar Code Reader	P/N 38548-102

If required, modify the appropriate files as indicated in USA 83-035. Check that the files have been edited properly. If the files have been edited, perform a shutdown.

4-5. Calibrate all robotic assemblies (Sample and Process Pipettors, Sample Barcode Reader and Reagent Actuator) (CM 3, 4, 5 and 7).

4-6. Using the **Maintenance, Cals and Checks, Temperature Calibration** screen, check that each controlled system is within each range (VP-5). Perform a Temperature Calibration. (Optional) (CM-13)

4-7. Perform an **MEIA Station** Verification. (CM 10)

4-8. Perform **FPIA and MEIA optic Initializations**. (CM12 and 11)

4-9. Using the appropriate **CONFIGURATION** screens and printouts made in step 1 (1-1 to 1-12), Restore the following system configurations:

Assay Display Order;	ASSAY/ DISPLAY ORDER
Define Panels;	PANEL
Panel Display Order;	PANEL/ DISPLAY ORDER
System Port Configuration;	PORT/, (HOST, CLI)
Report Header;	REPORT HEADER
Configure all Ratios;	RATIO
All Assay Control Levels;	CONTROL/ ASSAY/ CONTROL LEVEL/ CONTROL DETAILS
All Multicontrol Levels Assays;	CONTROL/ MULTICONTROL/ ASSAY/ CONTROL DETAILS

5. Give copy of Version 1.20 (LN 9A17-01) to customer system administration personnel.
6. Perform procedures F through I below.

E. Current system software is less than version 1.0.

1. Install a 16 Mb CPU board.
2. Perform procedure **SOFTWARE UPGRADE WITH HARD DRIVE FORMAT** (section D) above.

F. TSB DOCUMENTATION

Note: Read and insert the 1.2 version software Addendum in the customer operations manual.

1. From the Main Menu screen, select **CONFIGURATION/ INSTALLATION** screen.
2. To provide a hard copy confirmation that Version 1.2 was properly installed, print two copies of the screen, by pressing the ALT - PRINT keys.
3. Add the following information to each printout.
   - SYSTEM SERIAL NUMBER, Name and Address of Account
   - PRINT FSR NAME
   - SIGN FSR NAME
   - PRINT DATE
   - Number of software version 1.0 diskettes found
4. On each System Software Version 1.0 (P/N 38851-105) diskette found, add the following information:
   - SYSTEM SERIAL NUMBER, Name and Address of Account
   - PRINT TSB 83-010
   - PRINT FSR NAME
   - SIGN FSR NAME
   - PRINT DATE

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

5. Send a copy of the printout and the version 1.0 diskette to following address using the envelope that the 1.20 software was received in. Use priority mail or the international shipper that is included in the upgrade kit. International Only: Use the shipper if you are not returning the diskette to your field service administration office:

➔

Mark Slater M.S. 5-2	VIA U.S. Mail
Abbott Laboratories-Diagnostic	Mark Slater M.S. 5-2
1875 Walnut Hill Lane	Abbott Laboratories-Diagnostic
Irving, TX 75038	P.O. Box 152020
FAX: 214-518-7354	Irving, TX 75015-2020

6. Send the second copy to your area Field Service Administration.
7. Route the floptical software diskette(s) directly to Dallas Customer System Engineering Group, Atten: Mark Slater using the address above.

NOTE: It is required, as part of this TSB, to insure that all AxSYM software version 1.0 diskettes are removed from all world locations and returned to Abbott Diagnostics, Dallas.

G. SYSTEM VERIFICATION

1. After completion of the above perform one of the following runs:
   - If software was installed without hard drive format:
     Perform a run of MEIA and FPIA assay respective controls (High, Medium and Low) in triplicate.

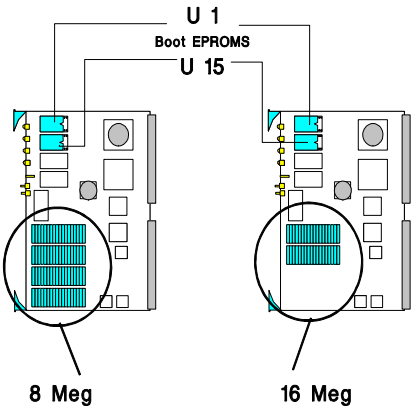
OR

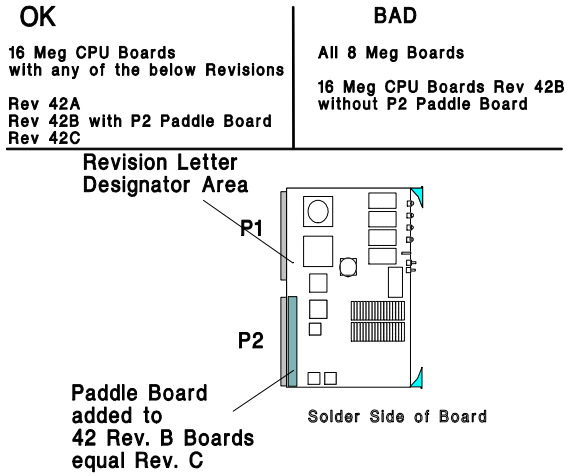
   - If software was installed with hard drive format:
     Calibrate each assay.
     Perform a control run (High Medium and Low) on each assay in triplicate.

2. Acceptance Criteria:
   - Each assay has a valid calibration curve.
   - For each assay, all levels of controls are within their specifications.

H. MODIFICATION CONTROL LABEL

⇒
- From the **STORED RESULTS** screen, indicate on your Service Order indicate the following:
  Number of **Cumulative Tests Completed:**
  Number of **Cumulative Tests Initiated:**
- Mark the modification control label to indicate completion of TSB 83-010.





CPU IDENTIFICATION
FIGURE 1

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Screw above Transfer Mechanism hits mechanical stop on Transfer Assembly

TSB#: **83-009**

ORIGINATOR:
Fred Schwartz

PRODUCT:
AxSYM® (83)

APPROVED: **Mark Slater 4/11/94 (signature on file)**

REF. ECN: **VTX 2608**

IMPLEMENTATION:	TSB Part/Kit #: **14494-308**	Upgrade Time: **.5 Hr.**
☐ **Immediate** ☒ **Next Service Call** ☐ **Next Failure** ☐ **Optional**	TSB Effectivity/ Part(s) Availibility: **12-JAN-94**	Validation Time: **.25 Hr.** Total Mod. Time: **.75 Hr.**
Instruments Requiring Modification: **S/N 1000 to 1085**		

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

I. Distribution:
International and USA.

II. General

A. Purpose:
The purpose of this TSB is to notify the field of a mechanical interference issue involving the Transfer Mechanism and a ground screw above it.

Some instruments have a screw holding the ground wire for the Transfer Theta Motor that is too long. This mechanical interference can lead to errors when loading and unloading RVs. See Figure 1 on page 3 for the location of this screw. Note that Process Distribution Board Shroud is removed in this illustration to clearly show the location of the screw. The resolution is to remove this screw and replace it with a shorter one. The screws that were initially installed are 10-32 Sems screws, 5/8" long (P/N 14494-310). The screw that replaces the old one is a 10-32 Sems screw,1/2" long (P/N 14494-308).

B. Administrative Notes:

USA: This TSB should be closed out in Fieldwatch as follows: SC=03 TC=09 RC=93
Discard the old screw (P/N 14494-310).

INTERNATIONAL: Discard the old screw (14494-310).

C. Time Required:
15 minutes for upgrade, 30 minutes for instrument checkout.

D. Tools required:
10" #2 Phillips screwdriver

E. Parts:
USA: All AxSYM™ trained FSRs will get 5 14494-308 10-32 x 1/2 screws

International: Send forecast requirements to Worldwide Service Logistics in Dallas

Part Description	Part number/Catalog number	Quantity
Screw, Sems: 10-32 x 1/2	14494-308	1

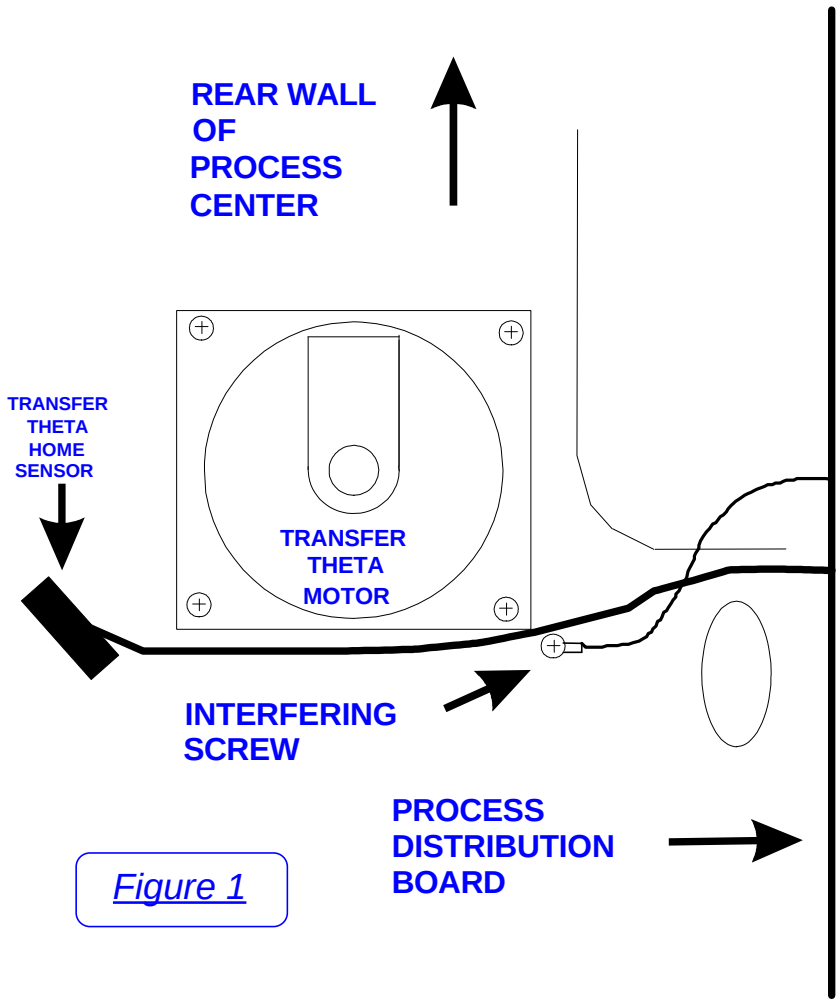


Figure 1

III. PROCEDURE:

1. Perform an instrument shut down.
2. Power down the AxSYM™ Analyzer.
3. Remove the Hopper and open the Processing Center door.
4. Remove the 3 screws that hold the Process Distribution Board Shroud in place.
5. Remove the Process Distribution Board Shroud.
6. Remove the old screw (interfering screw as shown in Figure 1).
7. Install the new screw.
8. Remove the Processing Carousel Cover.
9. Remove the Processing Carousel.
10. Rotate the Transfer Mechanism slowly by hand in the counter-clockwise direction until it is aligned with the RV Carousel transfer station to verify there is no mechanical interference.
11. Re-install the Processing Carousel.
12. Re-install the Processing Carousel Cover.
13. Re-install the Process Distribution Board Shroud.
14. Power up the AxSYM™ Analyzer.
15. Load and retrieve an RV using Diagnostic Controls to verify proper operation.
16. Close the Processing Center Center Cover.
17. Install the Matrix Cell Hopper.
18. Perform an instrument start-up
19. Discard the old screw.
20. Mark off box 9 on the Modification Control Sticker.

END OF DOCUMENT

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
RV CAROUSEL HOME FLAG

TSB#: **83-008**

ORIGINATOR:
Rod Defibaugh

PRODUCT:
AxSYM® (83)

APPROVED: **Mark Slater 1/4/94 (signature on file)**

REF. ECN: **VTX-2581**

IMPLEMENTATION:	TSB Part/Kit #: **38220-104**	Upgrade Time: **0.5 Hr.**
☒ **Immediate** ☐ **Next Service Call** ☐ **Next Failure** ☐ **Optional**	TSB Effectivity/ Part(s) Availibility: **04-JAN-94**	Validation Time: **1.0 Hr.** Total Mod. Time: **1.5 Hr.**
Instruments Requiring Modification: **S/N 1000 - 1099**		

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

I. Distribution:
USA and International

II. General

A. Purpose:

To improve the reliability of the RV movement between RV Carousel and the Transfer Assembly the home position of the RV Carousel must be shifted. This modification is performed by replacing the Home Flag on the RV Carousel.

B. Administrative Notes:

The part in this TSB will be included in a "Installation Upgrade Kit" P/N 64547-101. This kit will include parts for TSB 83-004, 83-006, 83-008 and ISA 83-001 to be performed on system installation. Only one upgrade kit is required for each system installation.

USA: Upon notification of AxSYM system installation, place an order with Field Service Parts for Installation Upgrade Kit P/N 64547-101.

This TSB should be closed out in Fieldwatch as follows: SC=03 TC=08 RC=93

INTERNATIONAL: Field Service Logistics will allocate the Installation Upgrade Kits (P/N 64547-101) per serial number and will request an order per that allocation.

C. Time Required:
30 minutes for upgrade, 10 minutes for instrument checkout.

D. Tools required:
2 phillips screwdriver

E. Parts:
The part in this TSB will be included in a "Installation Upgrade Kit" p/n 64547-101. This kit will include parts for TSB 83-004, 83-006, 83-008 and ISA 83-001 to be installation. Only one upgrade kit is required for each system installation.

The part required for this modification is as follows.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

Part Description	Part number/Catalog number	Quantity
RV Flag	38220-104/ Not a Catalog Part	1

Part Disposal: The RV Carousel Home Flag removed from the system can be disposed of in the field.

III. Procedure:

1. Perform a shutdown.
2. Remove and Install the RV Carousel Home Flag p/n 38220-104
    1. Lift and remove the system cover that surrounds the RV Carousel.
    2. Leave the PAUSE and ADVANCE push buttons attached to the cover.
    3. Rotate the RV Carousel and locate the RV Carousel Home Flag.
    4. Remove the RV Carousel Home Flag.
    5. Install the new home flag 38220-104.
    6. Rotate the RV Carousel to insure that the flag clears the home sensor.
    7. Reinstall the cover assembly.
3. Perform Functional Verification
    1. Turn on system power and perform a Start Up (F2).
    2. From the Maintenance/ Cals and Checks/ Robotics/ Sample Pipettor screen, calibrate the Sample Probe.
    3. Perform a Functional Verification.
    4. Using the Sequencer, perform the XFER/RVTEST.SEQ. Check that the RV's are moved without error.
        NOTE: As this modification is to be done during installation, this procedure needs to be performed only once.
    5. After the instrument warm-up has completed, run the assay run described in the installation procedure.
        NOTE: If this modification is not being performed during installation, run triplicates on all levels of controls on two assays of the customers choice (1-MEIA and 1-FPIA).
    6. Check that the controls are within specification.
4. Mark Modification Control Sticker to indicate completion of TSB 83-008.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Probe Holders with Captive Hardware

TSB#: **83-007A**

ORIGINATOR:
Emile Diou

PRODUCT:
AxSYM® (83)

APPROVED: **Jim Rydberg 3/2/94 (signature on file)**

REF. ECN: **VTX-2546**

IMPLEMENTATION:	TSB Part/Kit #: **4-37305-02**	Upgrade Time: **.5 Hr.**
☐ **Immediate** ☐ **Next Service Call** ☒ **Next Failure** ☐ **Optional**	TSB Effectivity/ Part(s) Availibility: **04-JAN-94**	Validation Time: **.5 Hr.** Total Mod. Time: **1 Hr.**
Instruments Requiring Modification: **S/N 300 - 1086**		

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

NOTE: This TSB is being re-released to change the implementation to NEXT FAILURE.

I. Distribution:
International and USA

II. General

A. Purpose:
The purpose of this TSB is to notify the field of the new probe holders assemblies with the captive hardware that prevents the locking thumbscrew from coming loose. These probe holder assemblies are to be installed on both the sample and process pipettor.

B. Administrative Notes:
USA: This TSB should be closed out in Field/Watch as follows: SC=03 TC=07 RC=93 Field Service Logistics will distribute parts based on IRL. To upgrade the probe holder assembly in your kit to a C/N 4-37305-02, open a 0DEF call and show usage of this part with the TC = Z7. Return parts through normal procedures.

INTERNATIONAL: Send forecast requirements through World Wide Logistics. Return all spare Probe Holder assemblies (C/N 4-37305-01) per RMA procedures.

C. Time Required:
Modification time = 30 minutes
Validation time = 30 minutes
Total time = 1 hour

D. Tools required:
1 Phillips screwdriver

E. Parts:

Part Description	Catalog number	Quantity
Probe holder assembly	4-37305-02	2

III. Procedure:
Shut down and power off the instrument.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

Sampling Pipettor

1. Open the processing center/incubator door.
2. Disconnect the sampling probe tubing.
3. Loosen the LLS clip thumbscrew, and rotate the probe counter-clockwise and lift out.
4. Remove the screw holding the probe holder assembly.
5. Remove the LLS clamp and install on the new probe holder assembly.
6. Install the new probe holder assembly.
7. Install the probe and tighten the LLS clip thumbscrew.

Processing Pipettor

1. Open the processing center/incubator door.
2. Disconnect the processing probe tubing.
3. Loosen the LLS clip thumbscrew, and rotate the probe counter-clockwise and lift out.
4. Remove the screw holding the probe holder assembly.
5. Remove the LLS clamp and install on the new probe holder assembly.
6. Install the new probe holder assembly.
7. Install the probe and tighten the LLS clip thumbscrew.

Validation

1. Power on the instrument.
2. Perform one flush for each pipettors.
3. Perform probe calibration for both pipettors
4. Perform the LLS tests under MAINTENANCE/DIAGNOSTICS/SYRINGE AND PROBES. Sampling RV Test (F3), and Processing RV Test (F6)
5. Perform the FLUIDICS check under MAINTENANCE/CALS AND CHECKS.
6. Select assays of the customer's choice, and run all levels of controls in triplicates.

Disposition

1. Return the probe holders in your kit and from the instrument. Mark the return tag: Returned per TSB 83-007. Return to Dallas.
2. Mark the modification control sticker.
3. At the completion of this modification perform a Total Service Call.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Reagent Pack Actuator Spring and Splash Bar

TSB#: **83-006**

ORIGINATOR:
Ron Elston

PRODUCT:
AxSYM® (83)

APPROVED: **Mark Slater 1/4/94 (signature on file)**

REF. ECN: **VTX-2569**

IMPLEMENTATION:	TSB Part/Kit #: **64546-101**	Upgrade Time: **.5 Hr.**
☒ **Immediate** ☐ **Next Service Call** ☐ **Next Failure** ☐ **Optional**	TSB Effectivity/ Part(s) Availibility: **04-JAN-94**	Validation Time: **1 Hr.** Total Mod. Time: **1.5 Hr.**
Instruments Requiring Modification: **n/a**		

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

I. Distribution:

International and USA.

II. General

A. Purpose:

The purpose of this TSB is to notify the field of a change to the Actuator assembly. The actuator spring and splash bar has been modified to give a greater percentage of reagent lid closures.

B. Administrative Notes:

The parts described in this TSB will be included in a "Installation Upgrade Kit ", P/N 64547-101. This kit will include part for TSB 83-004, 83-006, 83-008 and ISA 83-001. These modification are to be performed during instrument installation. Only one upgrade kit is required for each installation.

USA: Upon notification of AxSYM system installation, place an order with Field Service Parts for Installation Upgrade Kit P/N 64547-101. This TSB should be closed out in Fieldwatch as follows: SC=03 TC=08 RC=93
To upgrade the actuator assembly (C/N 4-37323-01) in your kit, open a 0DEF call and show usage of this part. Then return the part through normal channels.

INTERNATIONAL: Field Service Logistics will allocate the Installation Upgrade Kits (P/N 64547-101) per serial number and will request an order per that allocation. Return all spares Reagent Pack Actuators (C/N 4-37323-01) per RMA procedure. Order replacement parts through Field Service Logistics.

C. Time Required:

30 minutes for instrument modification, 60 minutes for instrument validation.

D. Tools required:

2 phillips

E. Parts:

The parts described in this TSB will be included in a "Installation Upgrade Kit ", P/N 64547-101. This kit will include part for TSB 83-004, 83-006, 83-008 and ISA 83-001. These modification are to be performed during instrument installation. Only one upgrade kit is required for each installation.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

Part Description	Part number/Catalog number	Quantity
Reagent Actuator		1
Spring	14720-065 / N/A	1
Actuator Splash Bar	38794-103 / N/A	

USA:

1. Each FSR will receive a new Reagent Pack Actuator Spring and Actuator Splash Bar to modify the Actuator in the instrument during installation.
2. The old Reagent Pack Actuator spring should be discarded.
3. The old Reagent Pack Actuator Splash Bar should be returned to:
   Abbott Laboratories
   1825 Walnut Hill Lane
   Irving, TX 75038
   Attn: AxSYM Refurb
4. Parts returned from kits should be marked:
   Returned TSB Part: TSB 83-006

International:

1. Mark all returned parts "Returned TSB Part: TSB 83-006" and return to Dallas for credit.

III. Procedure:

1. This procedure will be performed with the instrument in a normal READY state.
   Note: Do not unplug the actuator connectors during this procedure.
2. Remove the Reagent Pack Actuator cover.
   - Lift off.
3. Remove the Reagent Pack Actuator face plate (3 screws).
4. Connect to Sequencer and have displayed the "H:>\" prompt.
5. At the "H:>\" prompt type:
   - HOME ALL [ENTER].
   - OMS 21 MR5500 GO [ENTER].
6. While pressing slightly up on the splash bar (foot) of the actuator with one hand, use a pair of needle-nose plairs to remove the retainer e-ring at the top of the splash bar post.
7. Save the retainer e-ring to reinstall in a later step.
8. Remove the Actuator Splash Bar and spring by sliding the bar down.
   Note: Please note the orientation of the splash bar. Rounded bottom edge towards the front of the instrument.
9. Install the new actuator splash bar and actuator spring.
10. Slide the actuator post up through the bracket.
11. Secure actuator post at the top of the bracket with the retainer e-ring.
12. Replace the Reagent Pack Actuator face plate.
13. At the "H:>\" prompt type:
    - HOME 21 [ENTER].
14. Install the Reagent Pack Actuator cover.
15. Perform the following calibrations and verifications:
    Reagent Pack Actuator Calibration (CM-5)
    Run the ACTUATOR.SEQ (Sequencer ROBOTICS/ACTUATOR.SEQ), verify that reagent packs open and close in all four quardrants of the RV carousel.
16. Upon successful completion of the above procedures, run assay of the customer's choice (both MEIA and FPIA) with controls.
17. Mark modification control sticker.

Disposition:

1. Return the actuator in your parts kit and the splash bar from the instrument. Mark the return tag:
   Returned TSB Part: TSB 83-006.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
OSP Boards with new current limiting resistors for optocouplers

TSB#: **83-005**

ORIGINATOR:
Fred Schwartz

PRODUCT:
AxSYM® (83)

APPROVED: **Mark Slater 4/11/94 (signature on file)**

REF. ECN: **VTX 2539**

IMPLEMENTATION:	TSB Part/Kit #: **4-37326-02**	Upgrade Time: **.5 Hr.**
☐ **Immediate** ☐ **Next Service Call** ☒ **Next Failure** ☐ **Optional**	TSB Effectivity/ Part(s) Availibility: **03-FEB-94**	Validation Time: **1 Hr.** Total Mod. Time: **1.5 Hr.**
Instruments Requiring Modification: **S/N 1000 to 1062**		

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

I. Distribution:
International and USA.

II. General

A. Purpose:
The purpose of this TSB is to notify the field of a change to the OSP assembly that is designed to reduce the incidence of OSP-related failures. The value of the current limiting resistors for optocouplers on the OSP assembly have been changed to drive the optocoupler at an appropriate level.

B. Administrative Notes:
USA: This TSB should be closed out in Fieldwatch as follows: SC=03 TC=Z7 RC=93 To upgrade the OSP board (C/N 4-37326-01) in your kit, open a 0DEF call and show usage of this part. Then return the part through normal channels. You will be replenished with 4-37326-02.

INTERNATIONAL: Return all spares OSP boards (C/N 4-37326-01) per RMA procedure. Order replacement parts through Worldwide Service Logistics.

C. Time Required:
30 minutes for upgrade, 90 minutes for instrument checkout.

D. Tools required:
Standard FSR Tool Kit

E. Parts:
USA:

1. Each FSR will receive a new OSP assembly to replace the one in his kit.
2. The old OSP should be returned to:
   Abbott Laboratories
   1875 Walnut Hill Lane
   Irving TX 75038
   Attn.: AxSYM Refurb
3. Mark on the return tag :
   Returned from kit per TSB 83-005

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

International: Send forecast requirements to Worldwide Service Logistics in Dallas

Part Description	Part number/Catalog number	Quantity
OSP assembly	4-37326-02	1

III. Procedure:

1. Shut down and power off the instrument.
2. Open the Processing Center/Incubator Door.
3. Disconnect (9) connectors from the top of the OSP Assembly.
4. Remove the OSP Card Cage Cover (5) screws.
5. Remove the OSP assembly.
6. Install the new OSP assembly.
7. Install the OSP Card Cage Cover.
8. Connect all connectors to the OSP Assembly.
9. Power on the instrument.
10. After the instrument warm-up and start-up are completed, perform the following verifications:
    MEIA station Verification
    MEIA Optics Verification Initialization
    FPIA Optics Verification Initialization
11. Upon successful completion of the above verification procedures, run assays of the customer's choice.
    This includes:
    An MEIA assay
    An FPIA assay
    all levels of controls for each assay
12. Mark off box 5 on the Modification Control Sticker
13. Mark the parts return tag:
    Returned per TSB 83-005 and note the type of failure.

END OF DOCUMENT

ABBOTT ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
TRANSFER ASSEMBLY (37040-103) with IMPROVED PICKER ARM

TSB#: **83-004**

ORIGINATOR:
Rod Defibaugh

PRODUCT:
AxSYM® (83)

APPROVED: **Mark Slater 1/4/94 (signature on file)**

REF. ECN: **VTX-2567**

IMPLEMENTATION:	TSB Part/Kit #: **38068-105**	Upgrade Time: **0.5 Hr.**
☒ **Immediate** ☐ **Next Service Call** ☐ **Next Failure** ☐ **Optional**	TSB Effectivity/ Part(s) Availibility: **04-JAN-94**	Validation Time: **1.0 Hr.** Total Mod. Time: **1.5 Hr.**
Instruments Requiring Modification: **S/N 1000 - 1099 Excluding serial number systems listed below**		

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

I. Distribution:
USA and International

II. General

A. Purpose:
To improve the reliability of the RV movement between RV Carousel and the Transfer Assembly the Picker Arm has been changed. The changes are: 1) Picker Tip is reinforced by the addition of a ridge. 2) The profile of the tip has an increased contact area to the RV pull tab (football).

B. Administrative Notes:
Manufacturing has performed this modification on the following systems 1042, 1043, 1054 and 1055.

The part in this TSB will be included in a "Installation Upgrade Kit" P/N 64547-101. This kit will include parts for TSB 83-004, 83-006, 83-008 and ISA 83-001 to be performed on system installation. Only one upgrade kit is required for each system installation.

USA: Upon notification of AxSYM system installation, place an order with Field Service Parts for Installation Upgrade Kit P/N 64547-101.
This TSB should be closed out in Fieldwatch as follows: SC=03 TC=08 RC=93
To upgrade the Transfer Assembly (C/N 4-37040-01) in your kit, open a 0DEF call and show usage of this part. Then return the part through normal channels. Abbott Labs 1875 Walnut Hill Ln. Irving, Tx 75038 Attn: AxSYM System Refurb.

INTERNATIONAL: Field Service Logistics will allocate the Installation Upgrade Kits (P/N 64547-101) per serial number and will request an order per that allocation. Return all spares Reagent Pack Actuators (C/N 4-37040-01) per RMA procedure. Order replacement parts through Field Service Logistics.

C. Time Required:
30 minutes for upgrade, 60 minutes for instrument checkout.

D. Tools required:
2 phillips screwdriver

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

E. Parts:

The part in this TSB will be included in a "Installation Upgrade Kit" p/n 64547-101. This kit will include parts for TSB 83-004, 83-006, 83-008 and ISA 83-001 to be installation. Only one upgrade kit is required for each system installation.

The part required for this modifcation is as follows.

Part Description	Part number/Catalog number	Quantity
Picker Arm	38068-105/ Not a Catalog Part	1

Part Disposal: The Picker Arm removed from the system can be disposed of in the field.

III. Procedure:

Manufacturing has performed this modification on the following systems 1042, 1043, 1054 and 1055.

NOTE: This modification is to be performed during the installation of the system. However, should it be installed on a system that has processed samples, be aware that potential biohazardous material will be present at the Transfer Assembly and surrounding areas. CAUTION and good laboratory practices must be used.

1. Perform a shutdown.
2. If the system has processed samples, wipe the process area plate with decontamination solution.

   NOTE: Before removing the Transfer Assembly, notice the routing and orientation of the cable W-5 under the assembly. It is very important that during installation this cable is returned to the proper orientation. If the cable binds as the assembly rotates premature failure will occur.

3. Remove the Transfer Assembly from the Process Plate. Refer to service manual procedure RR-7A,B,C.
   1. Remove the Process Carousel Cover
   2. Remove the Process Carousel. The carousel is held into to its V-wheels by the motor at 2 o'clock.
   3. Lift the Air Deflector and remove the Air Thermistor.
   4. Remove the Air Deflector.
   5. Remove the Process Distribution Board cover.
   6. On the frame, use a pencil to mark an outline of the W-5 cable (Transfer Assembly cable). Note the orientation of the cable clamp.
   7. Remove the screw holding the W-5 cable to the frame.
   8. Remove W-5 J21 connector at the Process Distribution board.
      NOTE: The connector is located at the bottom center of the board. Use care not to disturb the connection of any adjacent cables.
   9. Remove the screw holding the Transfer Assembly to the Process Plate.
   10. Using a downward rocking motion, pull the Transfer Assembly free of its Process Plate Bearings.

4. If system has processed samples, wipe the Transfer Assembly with decontamination solution.

5. Picker Arm Removal and Installation.
   1. Remove the two screws holding the top splash plate to the assembly. Wipe plate with decontamination solution.
   2. From the underside of the assembly, remove the picker slide rod.
      NOTE: Do not change the orientation of the cable at its clamp.
   3. Remove and discard the Picker Arm.
   4. Install the new picker arm (p/n 38068-105).
      NOTE: It is normal for the picker slide rod to have some freedom of movement after it is installed.
   5. Check that the Picker Arm will extend and retract without restriction.
   6. Mark the Transfer Assembly p/n 37040-103.
   7. Using the two screws removed, install the Top Splash Plate to the Transfer Assembly.

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

6. Install the Transfer Assembly
    1. Install the W-5 cable at J 21 on the Process Distribution Board.
    2. Using the pencil outline, secure the W-5 cable to the frame.
    3. Install the upper and lower Transfer Assembly bearings onto the Process Plate.
    4. Install the Transfer Assembly to the Process Plate.
       NOTE: As you install the assembly align the white stripe on the assemblies splash plate with the hole in the Process Plate.
    5. Manually rotate the Transfer Assembly counter clockwise then clock wise from stop to stop. Check that the assembly moves freely and that the cable coils and un-coils without restriction.
    6. Install the Process Distribution Board cover
    7. Install the Air Thermistor.
    8. Install the Air Deflector.
    9. Install the Process Carousel. and the Process Carousel Cover.

7. Perform a Functional Verification.
    1. Power on the system and perform a Start Up (F2).
       NOTE: Check that all assemblies home properly. Be aware that W-5 J21 connector on the Process Distribution is close to many other connectors.
    2. Using the Sequencer, perform the XFER/RVTEST.SEQ. Check that the RV's are moved without error.
       NOTE: As this modification is to be due during installation this procedure needs to be performed only once.
    3. After the instrument warm-up has completed, run the assay run described in the installation procedure.
       NOTE: If this modification is not being performed during installation, run triplicates on all levels of controls on two assays of the customers choice (1-MEIA and 1-FPIA).
    4. Check that the controls are within specification.

8. Mark Modification Control Sticker to indicate completion of TSB 83-004.

END OF DOCUMENT

ABBOTT
ADD

TECHNICAL SERVICE BULLETIN

SUBJECT:
Extended Waste Option

TSB#: **83-002**

ORIGINATOR:
Rod Defibaugh

PRODUCT:
AxSYM® (83)

APPROVED: **Mark Slater 5/12/94**

REF. ECN: **VTX-2595**

IMPLEMENTATION:	TSB Part/Kit #: **LN 4B09-01**	Upgrade Time: **1.5 Hr.**
☐ **Immediate** ☐ **Next Service Call** ☐ **Next Failure** ☒ **Optional**	TSB Effectivity/ Part(s) Availibility: **25-MAR-94**	Validation Time: **2.0 Hr.** Total Mod. Time: **3.5 Hr.**
Instruments Requiring Modification: **N/A (Optional)**		

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

I. DISTRIBUTION:

Worldwide

II. GENERAL:

A. Purpose:

To extend the capacity of the AxSYM® waste system.

This option makes the following changes:

1. Increases the system consumable waste capacity from 300 to 500 samples by installing a larger consumable waste container.
2. Changes the software inventory tracking of consumable waste from 300 to 500 samples.
3. Removes the liquid waste container.
4. Routes the liquid waste to an external floor drain.
5. Disables the need to track liquid waste.

The AxSYM® liquid waste system is gravity fed. For the extended waste system to operate properly, the following requirements are necessary.

1. Verify that the site is aware that untreated system liquid waste will be added to the site liquid waste plumbing.
2. Floor drain must be within 4.5 meters (15 feet) of the system.
3. The routing of the tubing cannot raise more than 7.5 mm (3") off the floor.
4. The connection at the floor drain must be secure.

NOTE: Due to the wide variety of site floor drains, it is not possible to provide a device to secure the tubing to the drain.

Compatibility: This TSB is compatible on all AxSYM® Systems.

B. Administrative Notes:

USA only

This TSB should be closed out in Field Watch as follows: SC = 03 TC = 02 RC = 93

If modification is performed during system installation, show service charges as if normal TSB

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

modification.
If sold to the customer, add the following text to the billing comment section: "THIS IS A BILLABLE MODIFICATION"

International:
The International Service Manager should send forecast requirements to their responsible logistic organization. Please reference TSB 83-002 on forecast requirements.

C. Time Required:
Modification Time: 1.5 Hr.
Validation Time: 2.0 Hr. (Includes Total Service Call)

Total Mod. Time: 3.5 Hr.

NOTE: The modification time includes routing directly to an accessible floor drain. Any routing specific to the site has not been accounted for.

D. Tools required:
#2 Phillips Screw Driver
Tubing Cutting Tool (Diagonal Cutters is acceptable)
Adjustable Wrench

E. Parts:

Part Description	Part number/Catalog number	Quantity
Extended Waste Option	LN 4B09-01	1
This kit contains the following:		
Fitting, Elbow 1/2" Barb to 1/4 NPT	14603-155	1
Plug, 1/4 NPT	14603-136	1
1/2" ID Tygon® Tubing (25 Ft.)	64712-101	1
Container, Solid Waste, Large	37281-101	1
Clamp, Hose, 3/4"	14331-015	1
Teflon® Tape, 1/2"	14246-030	1
Union, Elbow 1/2" Barb	14603-161	1

Additional Optional Parts:
The site may need to provide some additional parts to secure the tubing to the drain. The union elbow (14603-161) in the kit is provided as an aid.

NOTE: Due to the wide variety of site floor drains, it is not possible to provide a device to secure the tubing to the drain.

III. PROCEDURE:

NOTE: This procedure modifies the waste system. Although a tubing decontamination procedure is performed, it is advised to always consider the waste system components as a potential biohazard.

1. Perform a MAINTENANCE, TUBING DECONTAMINATION procedure. Save the remainder of the decontamination solution.
2. Perform a Shutdown and power off the system.
3. From the Waste Compartment, remove the system's liquid waste bottle and the consumable waste container.
4. Using the decontamination solution, clean the interior of the waste compartment.
5. At the rear of the compartment, remove the waste bottle tubing.
6. Remove the waste tubing connector.
   NOTE: S/N < 1000 Save this connector for later use.
7. Apply Teflon® tape (14246-030) and install the 1/4 NPT plug (14603-136).
8. To gain access to the rear of the system, raise the system's two stabilization feet.
9. Remove the rear center access panel.
10. Using paper towels or other material, cover the cables below the manifold.
11. At the Waste Manifold, locate and remove the plug on the right side of the manifold. (Refer to Figure 1)

Potential Biohazard & Voltage Hazard. Observe Proper Safety Precautions.

12. S/N <1000 Using the connector removed from the interior of the waste compartment, apply Teflon® tape and install it in the manifold opening.
    S/N ≥ 1000 Apply Teflon® tape and install the Elbow Fitting (14603-155) into the opening and direct the output down.

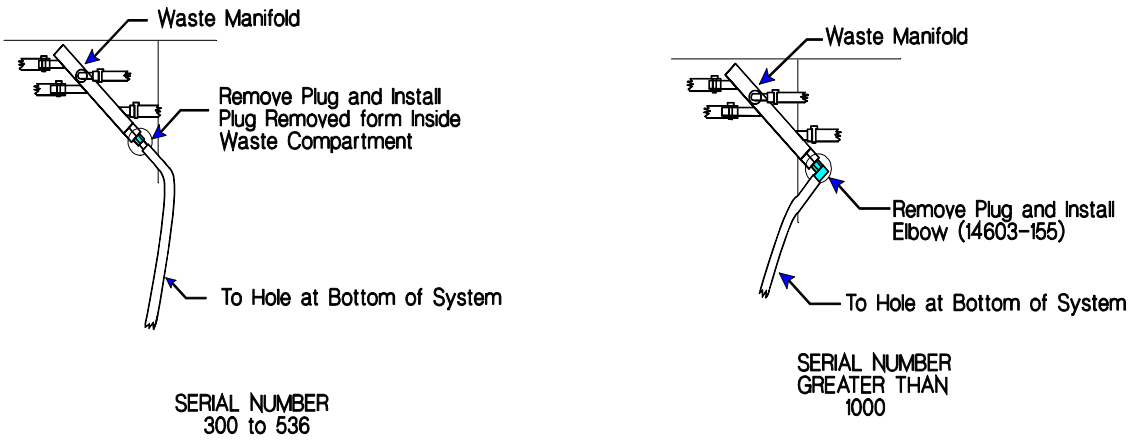
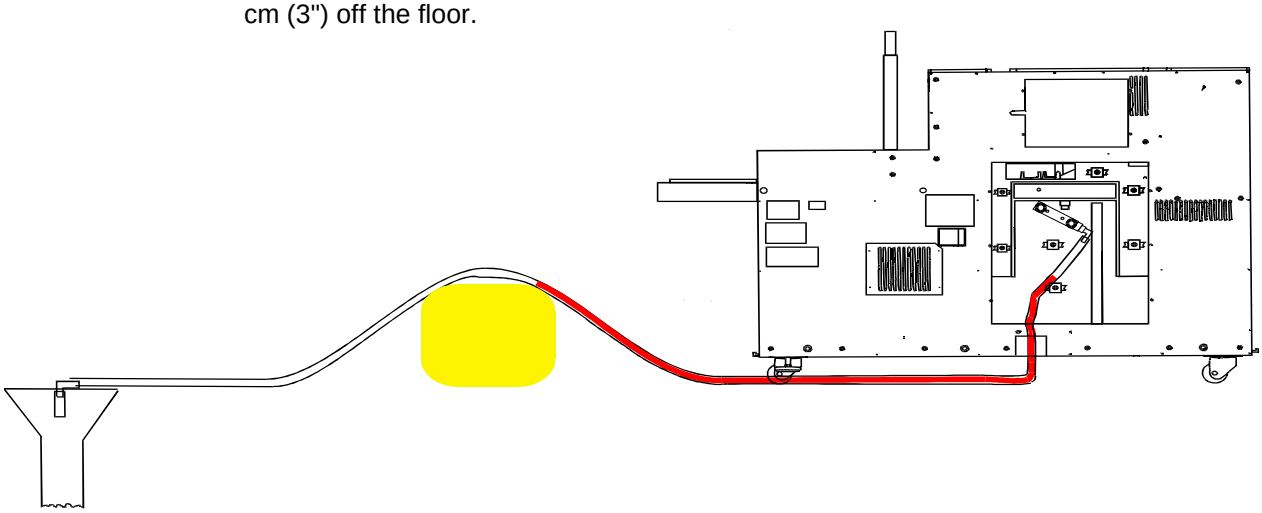
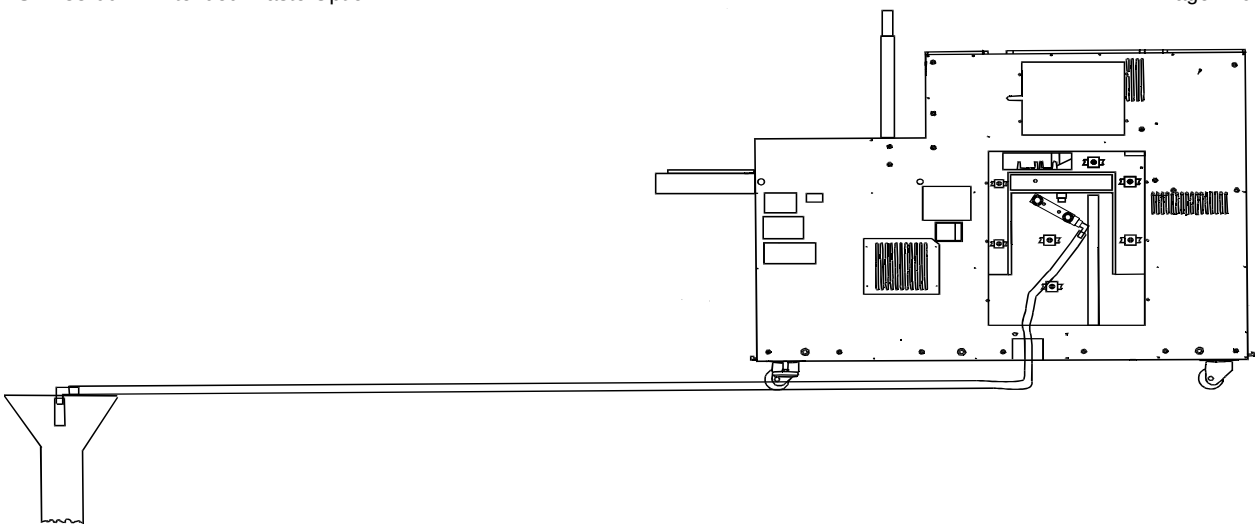


Figure 1

13. Locate the large hole in the bottom of the frame and behind the waste compartment .
14. Route the Tygon® Tubing (14246-030) through the hole and connect to the Fitting installed above.
15. Route the tubing from the AxSYM® System to a floor drain within 4.5 meters (15 feet) of the system.
    NOTE: As the tubing is routed to the floor drain, it must not be allowed to rise more than 7.5 cm (3") off the floor.



BAD Tubing Routing



GOOD Tubing Routing
Figure 2

16. The connection at the floor drain has the following requirements:
    - The tubing must be secured to the drain in a manner that insures that the waste will always flow into the drain.
      NOTE: Due to the wide variety of site floor drains, it is not possible to provide a device to secure the tubing to the drain.
    - Do not allow the output of the tubing to be submersed into site waste water.
    - To decrease the amount of bacteria growth in the tubing:
      Do not allow the output of the tubing to be submersed into waste water
      Do not allow the tubing to lay against the side of the drain
    - The tubing must be directed into the drain in a manner that does restrict flow of the fluid.

    To aid in this connection a Union Elbow (14603-161) has been provided.
    Cut the tubing to length and install the Union Elbow.
    Add an additional length of tubing and place it into the drain.
    (Refer to Figure 3)

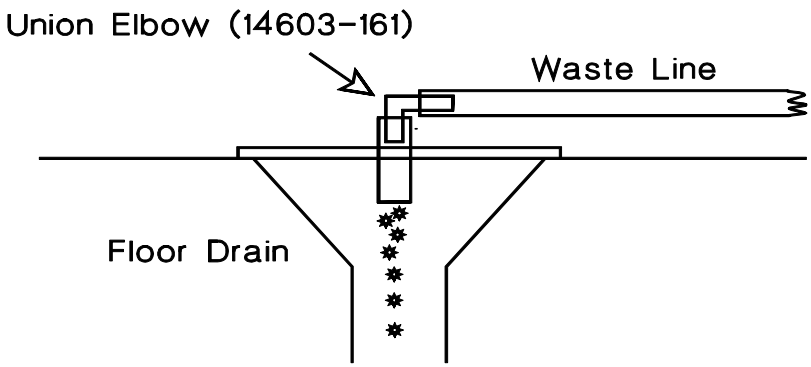


Figure 3

17. Power the system on.
18. Using the MAINTENANCE, PRIME FLUSH screen perform 2 FLUSH cycles on the Process Pipettor. Repeat as required.
    Check the connections inside the Waste Compartment and at the manifold for leaks.
    Check that the fluid flows through the tubing.
19. Line the new large Solid Waste Container (37281-101) with a Biohazard Bag.
20. Place Solid Waste Container into the Waste Compartment.
21. Using the CONFIGURATION, GENERAL screen, edit option #11 to EXTENDED WASTE.
22. Using the INVENTORY screen, update the CONSUMABLE WASTE to EMPTY.
    NOTE: The Consumable Waste will indicate 0% Full and 500 Remaining Tests. The Liquid

Inventory will remain at 0% Full and 1132 Remaining Tests.

23. Reinstall the Rear Center Access Panel.
24. Reposition the system to its original location.
25. Check that the tubing under the system is not pinched or crimped.
26. Adjust the two stabilization feet to the point that they firmly touch the floor and continue 3/4 turn.
27. Perform a Total Service Call.
    NOTE: During the Assay Run VERIFY THAT THE FLUID FLOWS THE COMPLETE LENGTH OF TUBING WITHOUT ANY RESTRICTIONS.
28. Properly dispose of the old liquid waste container.
29. Mark Modification Label 02 complete.

END OF DOCUMENT