

WATERS MANUFACTURING ASSEMBLY PROCEDURE

PAGE 1 OF 23
279002695 REV H

ITEM NUMBER
279002695

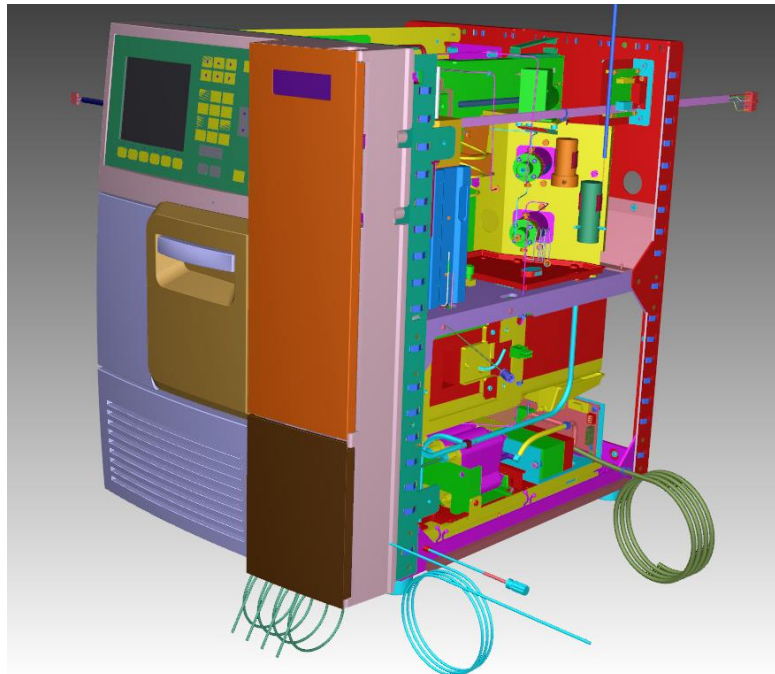
DESCRIPTION
ASSY, e2695 ALLIANCE X

WRITTEN BY
H. Guilmain

DATE
16MAR2012

REVISION RECORD

<u>REV</u>	<u>DATE</u>	<u>AUTHORITY</u>	<u>NOTES</u>
A	16MAR2012	H. Guilmain	ECO 9169451
B	13DEC2012	M. AUBIN	ECR 9175603
C	06FEB2013	H. Guilmain	ECO 9176992
D	22FEB2014	M. AUBIN	ECR 9185833
E	18JULY2014	M. AUBIN	ECR 9190319
F	09JUN2015	N.Szwaja	ECR 9198672
G	06MAR2017	P. Satyanarayana	ECR 9214377
H	26MAR2018	D.Guertin	ECR 9220474



<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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1.0	Reference for individual sheet metal and related components: 205001016 KIT, SHEET METAL, ALLIANCE X	NA
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- | | | |
|-----|--|--|
| 2.0 | Assemble the foam compartment as follows; <ul style="list-style-type: none">• Insert the (4) spacers 415000138 inside of top of the compartment 289000237 position the tabs of the spacers towards center of compartment.• Place the upper vial sensor 29.5" 289001162 into the upper sensor holder.• Place upper sensor holder 415000122 into the top of the compartment.• Place lower sensor holder 415000123 into the side of compartment.• Press the threaded drip tray support 415000165 into hole at back of dome. | |
|-----|--|--|

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
415000138	4	SPACER
289000237	1	ASSY, COMPARTMENT, FOAM
289001162	1	ASSY, VIAL SENSOR upper (29.5)
415000122	1	HOLDER, UPPER, SENSOR
415000123	1	HOLDER, LOWER, SENSOR
415000165	1	SUPPORT, DRIP TRAY, THREADED



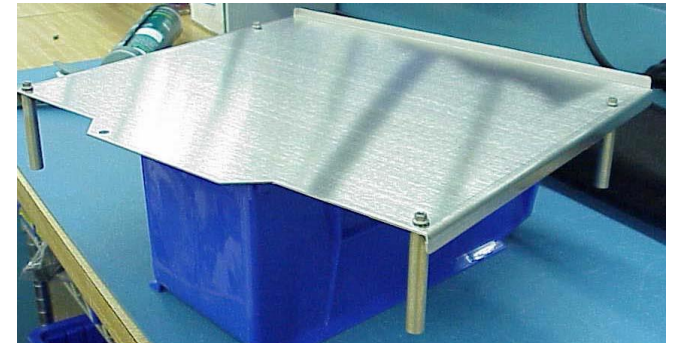
<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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- 3.0 Position the skid plate with the sides facing down and the back lip up.
Attach (4) 405000298 standoffs to skid plate WAT270116 using
(4) WAT034346 screws.
Turn the skid plate over and slide it into sample compartment,
line up the standoffs with holes in the chassis WAT270066.
Fasten using (4) WAT271256, (4) WAT410640 split lock washers and (4) M6 Flat washers.
Fasten upper and lower vial sensor holders to chassis using (5) WAT416308 screws.
Route the upper fiber optics cable through the 4 purse strings" only'.

PHILLIPS SCREWDRIVER

T20 TORX

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
405000298	4	STANDOFF, .375 DIA X 2.125LG
WAT270116	1	SKID PLATE
WAT034346	4	SCREW, METRIC, M4X12MM
WAT271256	4	SCREW PAN HEAD PH, M6X50MM LGSS
400005473	1	ASSY, CHASSIS, e2695 ALLIANCE
WAT410640	4	WASHER, METRIC LK/SPL M6 SPLIT LOCK
WAT410630	4	WASHER, METRIC PL/LG M6 FLAT
WAT416308	5	METRIC SCR PN HD 3.12 X 1.27 X 8



- 3.1 Secure the drip tray support using (1) WAT413416 screw, (1) WAT410440 lock washer and (1) WAT410430 washer. Do not over compress support.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT413416	1	SCREW, METRIC, M4 X 16
WAT410440	1	WASHER, METRIC, LK/SPL M4
WAT410430	1	WASHER, METRIC, PL/LG M4



OPER OPERATION DESCRIPTION

TOOL NUMBER/DESCRIPTION

4.0 Place the Lower Vial Sensor Fixture -2690- (999029646) inside the sample compartment against the flange on the right side of the skid plate, where the lower vial sensor is installed. **Note** the **TOP** position of the fixture

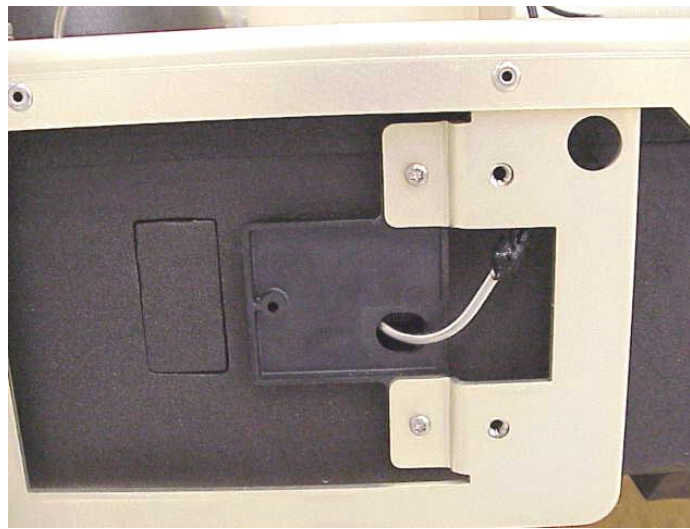
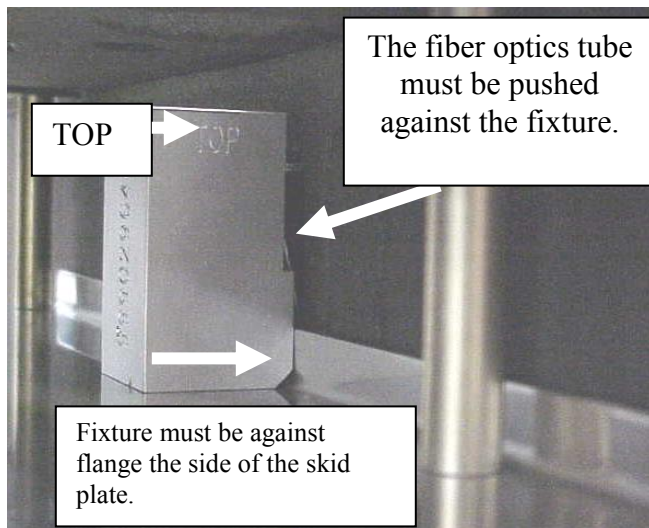
999029646 LOWER VIAL SENSOR FIXTURE
-2690-
RTV APPLICATOR

5.0 Slide the 24.5" fiber optics and tube into lower vial sensor holder to meet the Fixture. Route the fiber optics cable up through the chassis under the drip tray through the middle of the chassis to the Fluidics board area. Apply RTV onto the vial sensor holder.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
289001161	1	ASSY, VIAL SENSOR, LOWER

Using the Lower Vial Sensor Fixture (999029646), check the vial sensor tube position after fastening the lower vial sensor assembly and RTV application.

NOTE: Cover the RTV area with a Post it Note© to help eliminate getting it on your clothing. It will be removed later. The position will be checked again at the last step of this procedure Step 49 so the RTV has time to set. This will assure the tube has not moved during assembly.



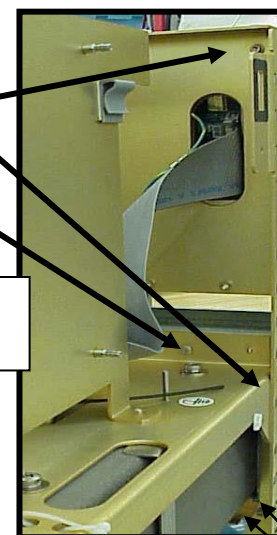
<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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6.0	Feed the ribbon cable & ground wire from the front panel through the front of the chassis. Mount the front display panel assembly to the chassis with the cross member bar. Attach with the 7 screws starting them by hand. Before securing the panel hold the panel up as so that the chassis edge and the front panel edge are even. Secure the two top screws first and continue with the remaining 5 screws. Secure bottom 2 screws (WAT081265) to Front Panel Assembly.	T10 TORX T20 TORX
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<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
279002592	1	ASSY, FRONT BEZEL W/KEYPAD, ALLIANCE X
WAT034346	7	SCREW, METRIC, M4X12MM
WAT081265	2	SCREW, M3 X 10 SEMS



WAT034346
7 places



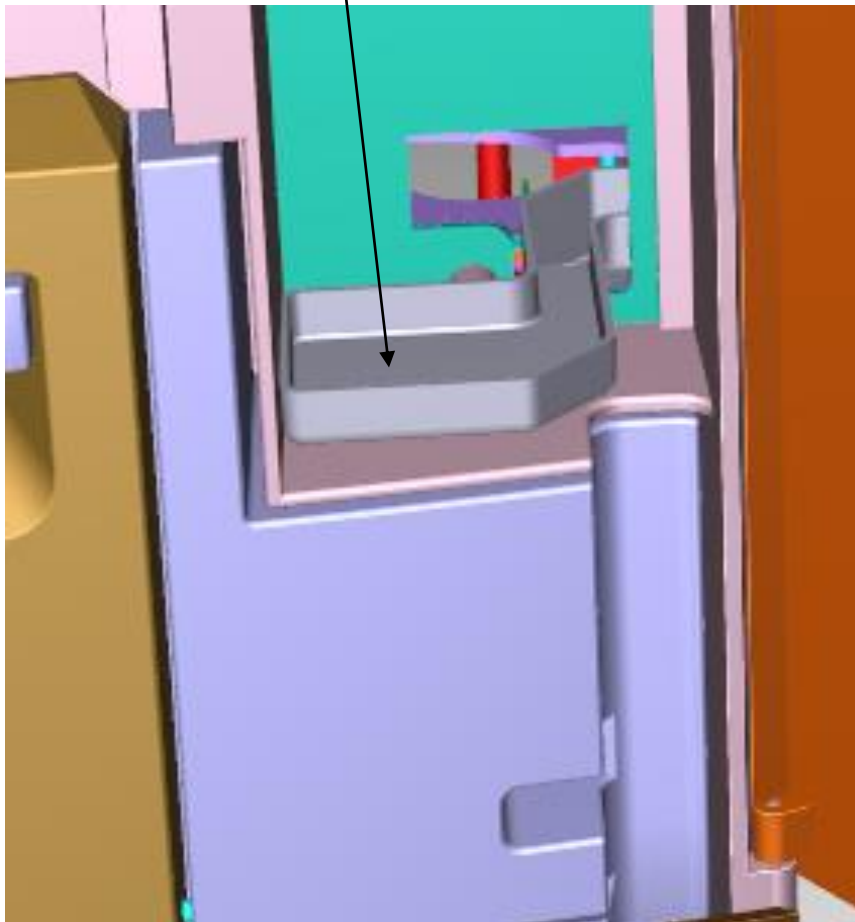
WAT081265
SCREW MX10 SEMS
2X

7.0	Slide carrier assembly into the sample compartment.
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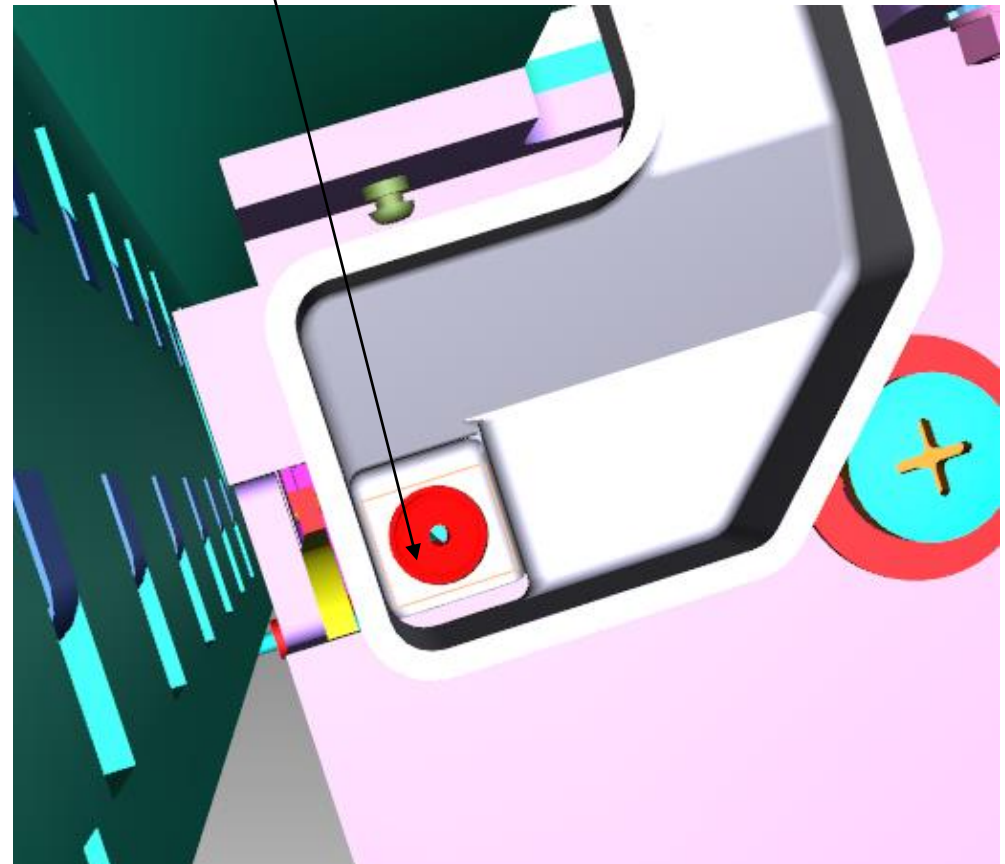
<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270457	1	ASSY, CARRIER FLUIDIC MODULE

<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
8.0	Assemble fitting WAT270503 to the drip tray 415002702 and secure with nut WAT050596. NA Place 1" of velcro loop onto drip tray (415002702) and press velcro hook to loop. Insert drip tray (415002702) thru opening in front as shown.	

415002702
DRIP TRAY



WAT270503 FITTING
WAT050596 NUT



<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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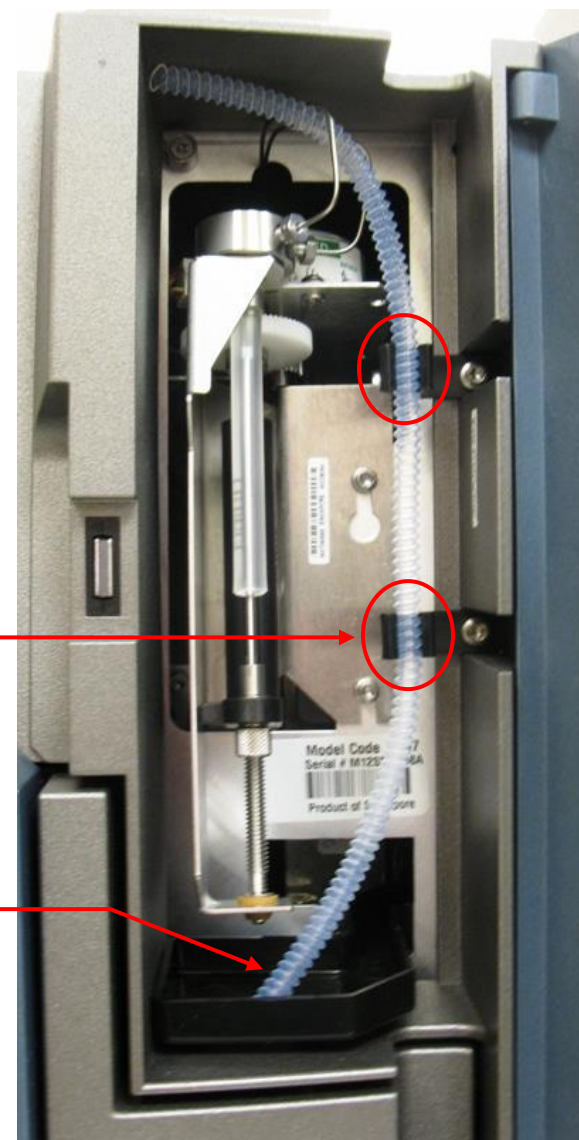
8.1	ASSEMBLE CONVOLUTED TUBE:	NA
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<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT241095	12in	TUBING CONVULTED PTFE 1/4ID

- Attach Convoluted Tube PN# WAT241095 within Syringe compartment of Bezel assembly by snapping the tube into the (2) plastic clips.
- Set the bottom of the tube in the drip tray.
- Route the top end of the tube up and fold over within the Syringe Compartment.

PLASTIC MOUNTING
CLIPS FOR ATTACHING
CONVOLUTED TUBE
(2X)

DIRECT THE TUBING
OVER THE DRIP TRAY.
BEND END OF TUBE AS
NECESSARY TO
ENSURE PROPER
DRAINING.



OPER OPERATION DESCRIPTION TOOL NUMBER/DESCRIPTION

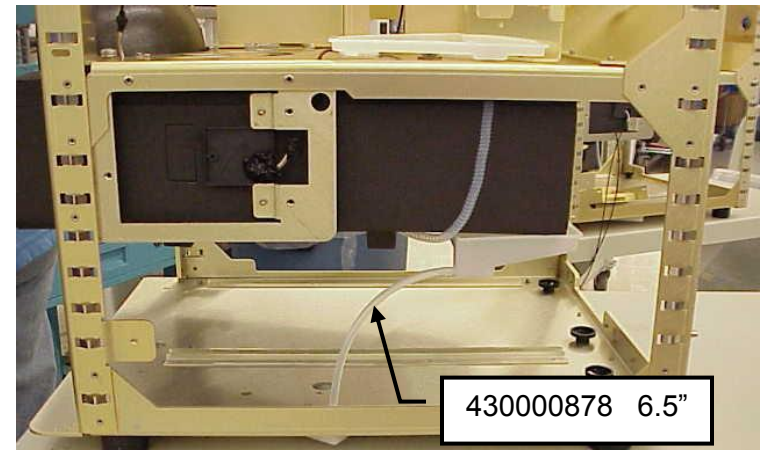
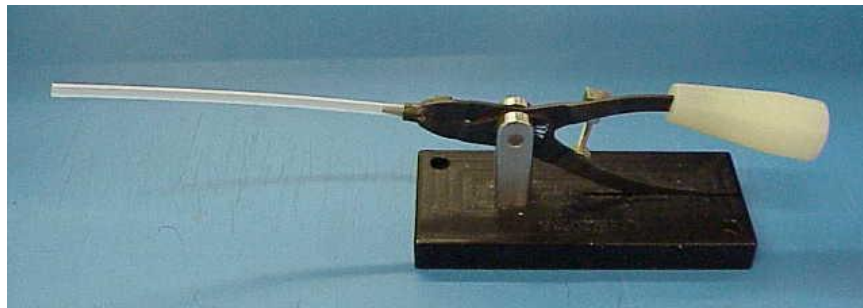
- 9.0 Assemble fitting WAT270503 to the drip tray WAT270346 and secure with nut WAT050596. 3/8 NUT DRIVER
Add the WAT241095* (9") convoluted tubing to the syringe drip tray and the other end to Tee.
Place 1" of velcro loop onto drip tray (white side up) and press velcro hook to loop.
Position the drip tray into syringe compartment leading the tubing through the chassis.
Route the convoluted drains line from the syringe and fluidics drip tray through the sample compartment foam holders and join together with tee fitting, to hold the convoluted tubing when attaching the T-Fitting.
Attach WAT241095 *(6") tubing to bottom of tee (leave dangling).

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270346	1	DRIP TRAY, COLUMN AREA
WAT270503	1	FITTING, STHREAD TO PORT S240-6
WAT050596	1	NUT, HEX 1/4-28 3/8 ST
WAT212335	1	VELCRO .75 SQ X .12 HIGH HOOK
WAT212336	1	VELCRO, .75 SQ X .12 HIGH LOOP
WAT270543	1	TEE CONNECTOR, TUBE TO TUBE
205000213	1	*KIT, CONVOLUTED TUBING, 2690
*The following convoluted (WAT241095) tubings are from tubing kit 205000213.		

- 10.0 Stretch both ends of 430000878 (6.5") tubing using 999027834 before assembling the tubing to the sample compartment fitting and to the chassis fitting.

999027834 FIXTURE, TUBING
STRETCH

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
430000878	6.5	TUBING, POLYETHYLENE



OPER **OPERATION DESCRIPTION**

11.0 Slide the pump tray into the chassis. Place the pump tray test data record into the instrument file folder. The pump tray connections will be completed later in the process.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
289000526	1	ASSY, PUMP W/TRAY W/SEAL WASH

12.0 Connect the ribbon cable onto "from CPU" connection as shown.
Connect power supply cable to "Power" connector on the fluidics PCB.
Attach Ferrite Bead to ribbon cable.
NOTE: Ensure the pot on the vial sensor optical control unit is turned fully clockwise.

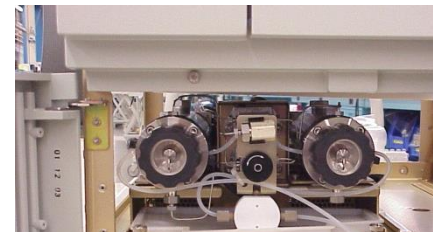
Install the fluidics driver board into the middle chassis compartment by pressing PCB over studs, Secure with WAT081265 screw.
Push the fiber optics cables into the vial presence sensor control

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
210000416	1	ASSY, PCB, ASSY, PCB, FLUIDIC ROHS
WAT270084	1	ASSY, CABLE, CPU TO PUMP DRIVER
WAT270617	1	CABLE DC POWER
WAT081265	1	SCREW, M3 X 10 SEMS
WAT290504	1	FERRITE BEAD

13.0 Install the CPU assembly into the chassis pressing the PCB onto studs. Secure with WAT081265 screw and, at the rear of the chassis, with two WAT034347 screws.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
210000411	1	ASSY, PCB CPU
WAT034347	2	SCREW, METRIC M4X6MM
WAT081265	1	SCREW, M3 X 10 SEMS

TOOL NUMBER/DESCRIPTION



T10 TORX



T20 TORX
T10 TORX

<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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- 14.0 Assemble the syringe drive to the chassis. Make cable connection to the "Syringe MTR" connector on the Fluidics PCB.
Allow extra wire for stress relief. Run the cable back through the purse strings and make a loop on the first one.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT060669	1	ASSY, SYRINGE DRIVE
WAT034346	2	SCREW, METRIC, M4X12MM

- 15.0 Tie wrap excess wire on V1.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT045248	1	ASSY, HPMV FINAL ASSY, M715
WAT027033	2	CABLE TIE MINIATURE

- 16.0 Tie wrap excess wire on V2.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT045248	1	ASSY, HPMV FINAL ASSY, M715
WAT027033	2	CABLE TIE MINIATURE

- 17.0 Assemble V1 into the lower opening secure with two screws.
Attach WAT045120 interim 11 position clip to V1 pin 1 to pin 1.
Connect to "Valve 1" on the Fluidics PCB.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT416410	2	SCREW, METRIC
WAT045120	1	CLIP, MOLEX INTERIM 11 POSITION

- 18.0 Assemble V2 into the upper opening secure with two screws.
Attach WAT078838 interim 12 position clip to V2 pin 1 to pin 1.
Connect to "Valve 2" on the Fluidics PCB.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT416410	2	SCREW, METRIC
WAT078838	1	CLIP, INTERIM 12 POSITION

T20 TORX



T20 TORX

OPER OPERATION DESCRIPTION

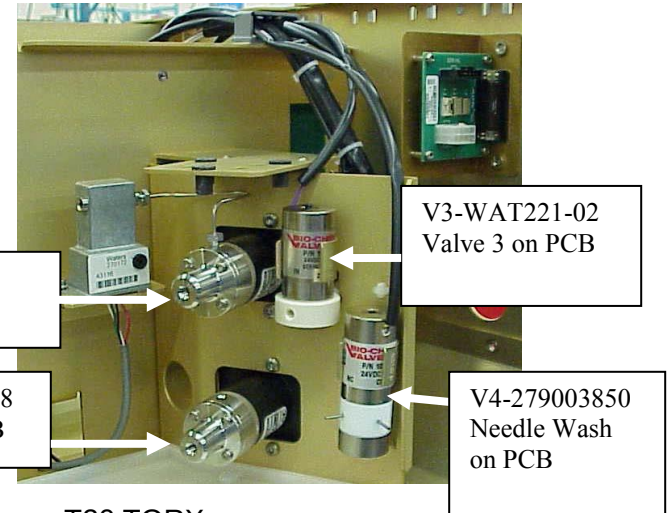
19.0 Assemble the waste tubing (271128) to the OUT port of V3.
Press V3 (221-02) and V4 (45614) into the clips as shown.
Connect V3 to Valve 3 on PCB.
Connect V4 to Needle Wash on PCB.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT221-02	1	V3, SOLENOID VALVE 15" LEAD
WAT271128	1	TUBING ASSY WASTE V3
279003850	1	V4, SOLENOID VALVE ASSY.

V2-WAT045248
Valve 2 on PCB

V1-WAT045248
Valve 1 on PCB

TOOL NUMBER/DESCRIPTION



20.0 Assemble the tubing WAT270409 using fixture 999025231 and 999025295 5/16 torque wrench set to 36 in/lbs. to the transducer as shown. Assemble the transducer to the chassis bracket. Connect XDUCR cable to the CPU and the transducer. Assemble tubing to V2.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270409	1	ASSY, TUBE TRANSDUCER TO V2
WAT270172	1	PRESSURE TRANSDUCER
WAT270078	1	ASSY, CABLE, ACCUM. PRESSURE XDUCR
WAT034346	2	SCREW, METRIC, M4X12MM

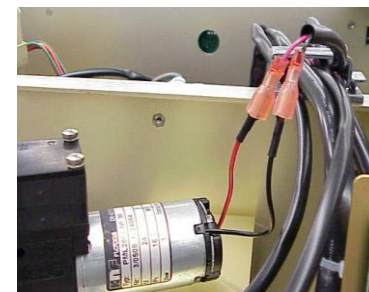
T20 TORX
999025231 TUBE TO TRANSDUCER
ASSY FIXTURE -2690-
999025295 WRENCH, TORQUE, 5/16
SET TO 36 in/lbs



21.0 Assemble the cable assembly to the wash pump.
Positive terminal RED to the RED wire and negative terminal BLACK to the BLACK wire

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT078785	1	ASSY, CABLE, WASHPUMP, M717

T10 TORX



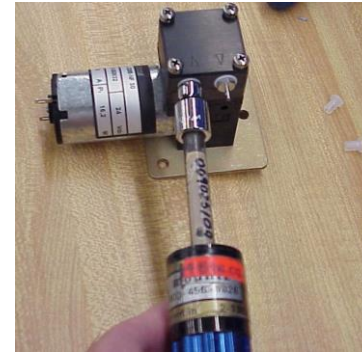
<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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22.0	Assemble the washer and barbed fitting to the vacuum pump using Driver Tool (999025109) set to 48 in/ozs. Verify washer is centered under the barb after torquing fittings.	999025109 VAC. PUMP MOUNTS DRIVER TOOL -2690- SET TO 48 in/ozs
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<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT078540	1	VACUUM PUMP M717
WAT060284	2	WASHER, .335X.196X.027 TFE 510
WAT035124	2	FITTING, TUBE

23.0	Assemble the plate to the wash pump as shown.	
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<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT416308	2	SCREW, PN HD, M3X8MM
WAT270218	1	PLATE, MOUNTING WASH PUMP



24.0	Place three well-nuts into the top holes of the valve mounting bracket. Assemble vacuum pump to the chassis mounting bracket and connect to Fluidics PCB.	
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T20 TORX

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT078856	3	WELL-NUT M4 X 0.7
WAT413416	3	SCREW, METRIC SKT CAP M4X16

Verify the barb fittings with and 1/4 open end wrench torqued to 48 in/oz.

48 In/oz. 1/4 TORQUE WRENCH

25.0	Assemble the column heater PCB and bracket to the rear of the fluidics compartment using two WAT034347 screws.	
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T20 TORX

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270859	1	ASSY, PCB AND BRACKET COL HTR
WAT034347	2	SCREW, METRIC M4X6MM



26.0	Press the power switch & cable into the chassis, oriented with the (-) on top and (o) at the bottom, using Fixture, Power Switch To Chassis Assy (999025160)	
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999025160 - FIXTURE, POWER SWITCH

to aid in assembly.

TO CHASSIS ASSY

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270614	1	CABLE ASSY REMOTE PWR SWITCH

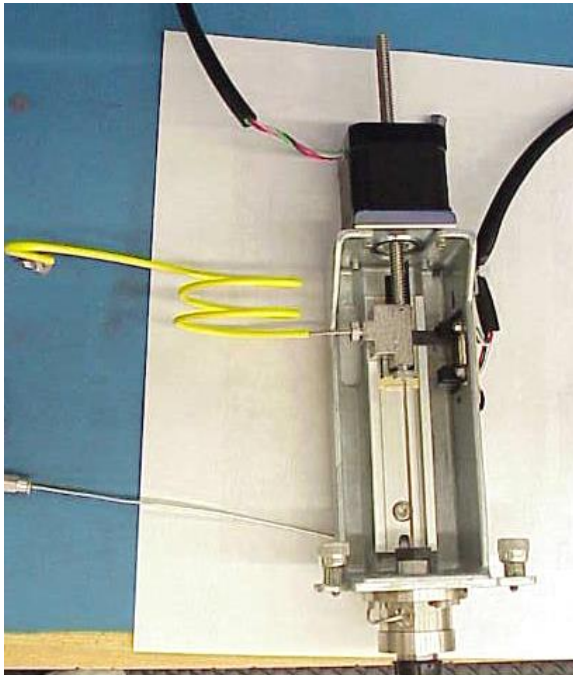
<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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27.0	Record the fluidics and CPU S/N and rev. of the PCB's onto the System Prep Check off Sheet WAT271402.	
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28.0	Dip or place 3 to 5 drops of IPA, P/N 100000146 or equivalent to both ends of the (yellow) Sample Loop, P/N 430001194 to wet the ferrules, then assemble to the needle union as shown. (NOTE: - IPA cannot be more than thirty (30) days in squeeze bottle.)	
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999025295 WRENCH, TORQUE, 5/16 SET TO 36 in/lbs 5/16 OPEN END WRENCH BOTTLE CONTAINING IPA

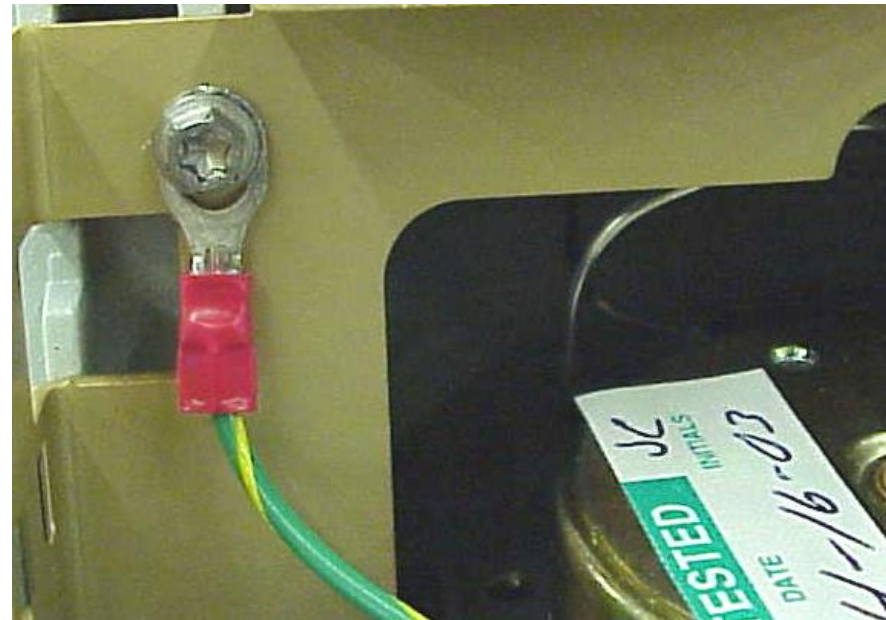
<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
430001194	1	ASSY, TUBE SAMPLE LOOP



Note: When routing cables to the Fluidics Driver board, make the board connection first leaving a

small amount of extra wire to allow for stress relief. Then route cables back through the purse strings NEATLY.

<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>						
29.0	Assemble the carousel drive onto the chassis, securing the 3 captive screws. Engage the carrier plate WAT270457 onto the carriage drive shaft.	T20 TORX LONG PHILLIPS SCREWDRIVER						
	<table> <tr> <th><u>PART #</u></th><th><u>QTY</u></th><th><u>DESCRIPTION</u></th></tr> <tr> <td>WAT271290</td><td>1</td><td>ASSY, MOLDED CAROUSEL DRIVE, 2690</td></tr> </table>	<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>	WAT271290	1	ASSY, MOLDED CAROUSEL DRIVE, 2690	
<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>						
WAT271290	1	ASSY, MOLDED CAROUSEL DRIVE, 2690						
30.0	Assemble the ground wire to the front panel screw above the syringe drive, using a star washer, ground lug and existing screw from the front panel.	T20 TORX						
	<table> <tr> <th><u>PART #</u></th><th><u>QTY</u></th><th><u>DESCRIPTION</u></th></tr> <tr> <td>WAT410450</td><td>1</td><td>WASHER, METRIC EXT TOOTH M4 (star)</td></tr> </table>	<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>	WAT410450	1	WASHER, METRIC EXT TOOTH M4 (star)	
<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>						
WAT410450	1	WASHER, METRIC EXT TOOTH M4 (star)						
31.0	Connect all cables to proper connectors from the carousel drive to the fluidics PCB and run the cables through the purse strings.							



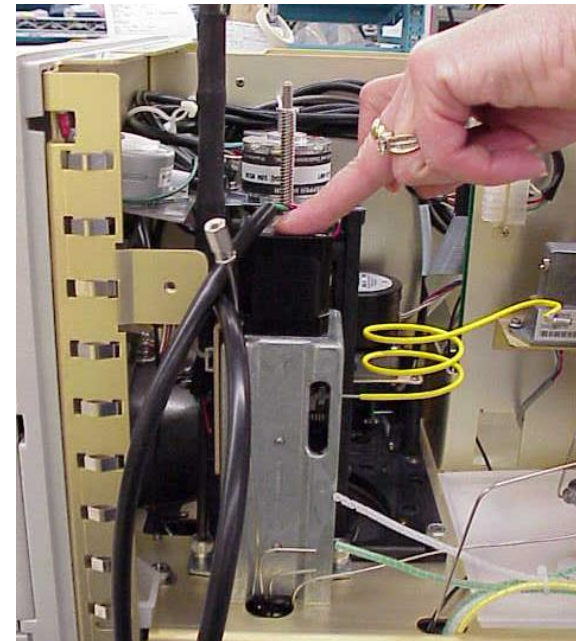
OPER OPERATION DESCRIPTION

32.0 Assemble the injector onto the chassis using phillips screwdriver.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
279003915	1	ASSY, INJECTOR, 2695

TOOL NUMBER/DESCRIPTION

PHILLIPS SCREWDRIVER
WITH ≈ 13 " LONG $\frac{1}{4}$ " EXTENSION



<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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CRITICAL STEP: Note 1. THE YELLOW SAMPLE LOOP COILS MUST BE SPREAD APART UNINFORMALLY.
Note 2. THE COIL MUST BE POSITIONED AWAY FROM THE CAROUSEL DRIVE.

THIS WILL ALLOW FREE MOVEMENT OF THE COIL SO IT CANNOT HANG UP ON THE SIDE OF THE CAROUSEL DRIVE DURING OPERATION.

33.0 Dip or place 3 to 5 drops of IPA, P/N 100000146 or equivalent, to the Sample Loop, P/N 430001194 to wet the ferrules. Then Plumb the sample loop to the transducer. **(NOTE: - IPA cannot be more than thirty (30) days in squeeze bottle.)**

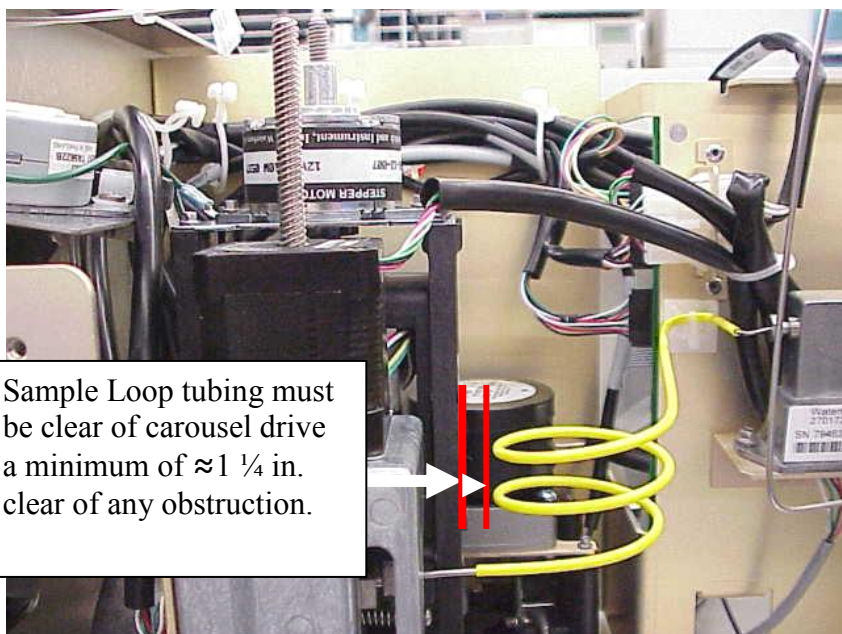
Secure sample loop to the cable mount with a cable tie

999025295 WRENCH, TORQUE, 5/16
SET TO 36 in/lbs

Tighten tubing's using 999025295 5/16 torque wrench set to 36 in/lbs.

CUTTERS
BOTTLE CONTAINING IPA

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT042173	1	CABLE MOUNT
WAT027033	1	CABLE TIE MINIATURE.



<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>																		
34.0	Install the injector motor extension wire 441000622 to Injector Motor connector on the fluidics driver PCB. Route wire over chassis bracket and push into bracket so that the ears spring out.																			
	<table><tr><td><u>PART #</u></td><td><u>QTY</u></td><td><u>DESCRIPTION</u></td></tr><tr><td>441000622</td><td>1</td><td>ASSY, CABLE, INJECTOR MOTOR EXTENSION</td></tr></table>	<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>	441000622	1	ASSY, CABLE, INJECTOR MOTOR EXTENSION													
<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>																		
441000622	1	ASSY, CABLE, INJECTOR MOTOR EXTENSION																		
35.0	Route the sensor wire above the syringe drive and through the purse strings Connect to the fluidic driver PCB "INJ_TOP_BOT_SENSORS". Connect the Injector Motor wire to the extension connector and capture excess wire with a cable tie and slip behind the transducer.																			
	<table><tr><td><u>PART #</u></td><td><u>QTY</u></td><td><u>DESCRIPTION</u></td></tr><tr><td>WAT027033</td><td>1</td><td>CABLE TIE MINIATURE</td></tr></table>	<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>	WAT027033	1	CABLE TIE MINIATURE													
<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>																		
WAT027033	1	CABLE TIE MINIATURE																		
36.0	Assemble the restrictor loop 430001336 to the injector as shown. Tighten tubings using WRENCH, TORQUE, 5/16 (999025295) to 36 in/lbs. The 90°bent end of the small restrictor will go into V1 when installed	999025295 SET TO 36 in/lbs. 5/16 OPEN END WRENCH																		
	<table><tr><td><u>PART #</u></td><td><u>QTY</u></td><td><u>DESCRIPTION</u></td></tr><tr><td>430001336</td><td>1</td><td>ASSY, TUBING, RESTRICTOR LOOP</td></tr></table>	<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>	430001336	1	ASSY, TUBING, RESTRICTOR LOOP													
<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>																		
430001336	1	ASSY, TUBING, RESTRICTOR LOOP																		
37.0	Plumb all tubing assemblies use Wrench, Torque, 5/16 (999025295) set to 36 in/lbs to secure tubings. Dip or place 3 to 5 drops of IPA, p/n 100000146 to Tube Assy P/N 430000105 to wet ferrules, then assemble to Filter and V1. (NOTE: - IPA cannot be more than thirty (30) days in squeeze bottle.)	999025295 TORQUE 5/16 WRENCH SET TO 36 in/lbs Bottle containing IPA																		
	(NOTE: Tie wrap the two syringe tubes together in the center.)																			
	<table><tr><td><u>PART #</u></td><td><u>QTY</u></td><td><u>DESCRIPTION</u></td></tr><tr><td>430000105</td><td>1</td><td>ASSY, TUBE, FILTER TO V1</td></tr><tr><td>WAT271816</td><td>1</td><td>ASSY, TUBE SYRINGE TO V3 (Back right side of the syringe block to V3)</td></tr><tr><td>WAT271815</td><td>1</td><td>ASSY, TUBE SYRINGE TO V2 (Front of the syringe block to V2)</td></tr><tr><td>WAT078565</td><td>1</td><td>717 V1 TO V2 TUBE ASSY.</td></tr><tr><td>WAT027033</td><td>1</td><td>CABLE TIE MINIATURE</td></tr></table>	<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>	430000105	1	ASSY, TUBE, FILTER TO V1	WAT271816	1	ASSY, TUBE SYRINGE TO V3 (Back right side of the syringe block to V3)	WAT271815	1	ASSY, TUBE SYRINGE TO V2 (Front of the syringe block to V2)	WAT078565	1	717 V1 TO V2 TUBE ASSY.	WAT027033	1	CABLE TIE MINIATURE	
<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>																		
430000105	1	ASSY, TUBE, FILTER TO V1																		
WAT271816	1	ASSY, TUBE SYRINGE TO V3 (Back right side of the syringe block to V3)																		
WAT271815	1	ASSY, TUBE SYRINGE TO V2 (Front of the syringe block to V2)																		
WAT078565	1	717 V1 TO V2 TUBE ASSY.																		
WAT027033	1	CABLE TIE MINIATURE																		

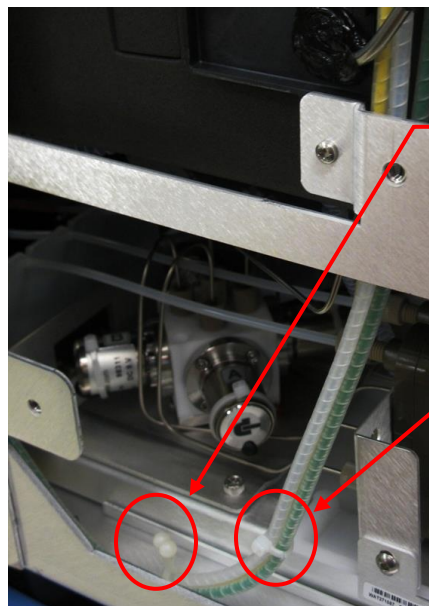
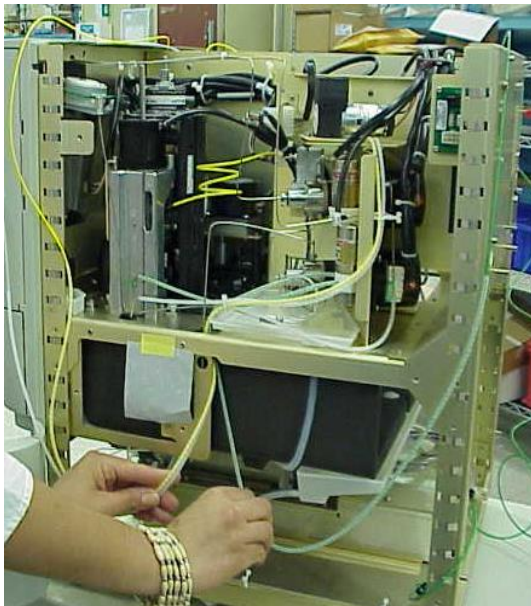
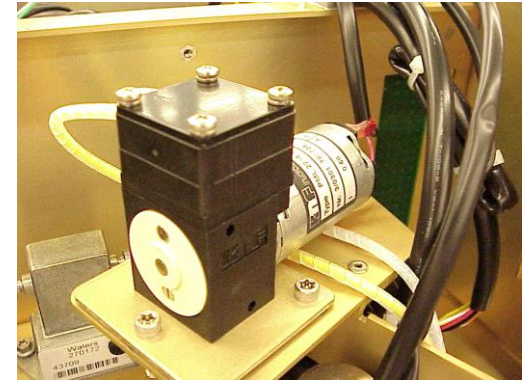
<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
38.0	Assemble the tubings from the tubing kit use Flare Tool (999119625) to open end of tubes.	999119625 FLARE TOOL

Attach the 107" yellow tubing to the wash pump waste barb(Flow Out→)
Attach the 21"clear tubing to the wash pump barb (Flow In ←) to Injector (Seal Wash Bottom tubing)
Route the wash pump tubings under the needle wash pump through the purse tie.

Attach the 9" green line to the seal pack with the green marker and to V4 Comm tube
Screw the ferrule side of the needle wash tubing assembly into V4 NC port.
Attach the 90" clear line to the V3 out waste tube.

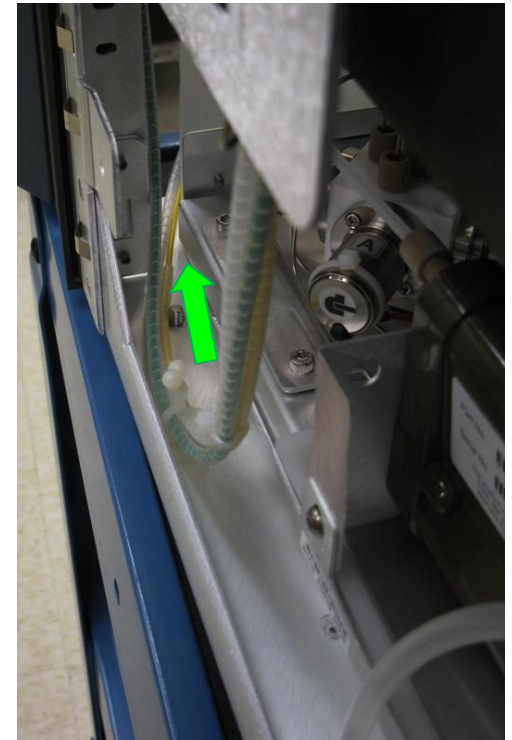
Tie wrap the tubing's to the restrictor loop.
Route the yellow, clear and needle wash tubing's down through the hole by the fluidics drip tray.
Tie wrap all three tubing's together and route through the front Purse Lock Standoff as shown.
Route the three tubing's out through the front of the instrument.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT271127	1	KIT TUBING 2690
WAT027033	2	CABLE TIE MINIATURE
430005420	1	ASSY, TUBE, NEEDLE WASH



ROUTE THE
THREE TUBINGS
THROUGH THE
PURSE LOCK
AND OUT THE
FRONT OF UNIT

TIE WRAP
YELLOW, CLEAR,
& NEEDLE WASH
TUBINGS HERE.



<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
39.0	Assemble the ground wire to the power supply. The correct ground stack-up is star washer, ground lug and lock nut.	7MM NUT DRIVER

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT410450	1	WASHER METRIC EXT TOOTH M4
WAT251620	1	LOCK NUT M4

40.0	Mount the power supply bracket to the power supply using Bracket, Power Supply (999043139) holder. Apply electronics assembly label onto the top of the power supply	999043139- BRACKET, POWER SUPPLY (Optional) T20 TORX DRIVER
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<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270068	1	BRACKET, MOUNTING P/S
WAT411510	2	SCREW, METRIC PAN HEAD M5X10
WAT410540	2	WASHER, METRIC LK/SPL M5
WAT097542	1	LABEL, ELECTRONICS ASSEMBLY
WAT270471	1	POWER SUPPLY 600W TESTED

41.0	Slide the power supply into chassis aligning the bracket slot with the chassis tab. Tighten the power supply screws.	REGULAR SCREWDRIVER
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42.0	Assemble ground wire from power supply to the chassis ground stud. Stack as follows: star washer, ground wire, lock nut, star washer, front panel ground wire, secure with lock nut. NOTE: The power supply ground should be closest to the chassis.	7MM NUT DRIVER
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<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270561	1	GROUND WIRE ASSEMBLY
WAT410450	2	WASHER METRIC EXT TOOTH M4
WAT251620	2	LOCK NUT M4

Record power supply serial number on the System Prep Check off Sheet WAT271402 in the folder.

43.0	Lock in the large gray cable by sliding the tab over the pins, verifying the cable is secured to the CPU and route cable down through the back slot of the chassis.
------	---

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270438	1	ASSY, CABLE CPU TO PUMP DRIVER (large gray cable)

OPER **OPERATION DESCRIPTION**
44.0 POWER SUPPLY CONNECTIONS

NOTE: Bottom, Middle and Top reference the connector positions on the power supply.

Middle connector - WAT270089 connect to the Front Panel, CPU and the Pump Driver PCB

Top connector - WAT270618 connect to the Column Heater and the Degasser

2 pin connector - WAT270614 Power switch

For the "Heater Cooler Option only" connect Cable WAT270616 to the power supply.

- 45.0 Press and lock the ribbon cables into the CPU from the fluidics drive board, and the front panel.
Attach (2) ferrite beads WAT290504 onto the 2 (ribbon) cables close to the CPU board.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270089	1	CABLE DC POWER
WAT270618	1	ASSY, CABLE POWR DEGAS + COL HTR
WAT290504	3	FERRITE BEAD FLAT CABLE
WAT270616	1	CABLE, H/C DC POWER CORD

- 46.0 Route the encoder cables from the pump tray up through the middle slot in the chassis and connect to the CPU board. Route transducer cables through the rear slot and connect to CPU board. Lock the large gray cable onto the pump board by sliding the tab over the pins, verifying that the cable is secured.

- 47.0 Route the column heater option cable (WAT270354) to J5 on the CPU and route into the clamp.

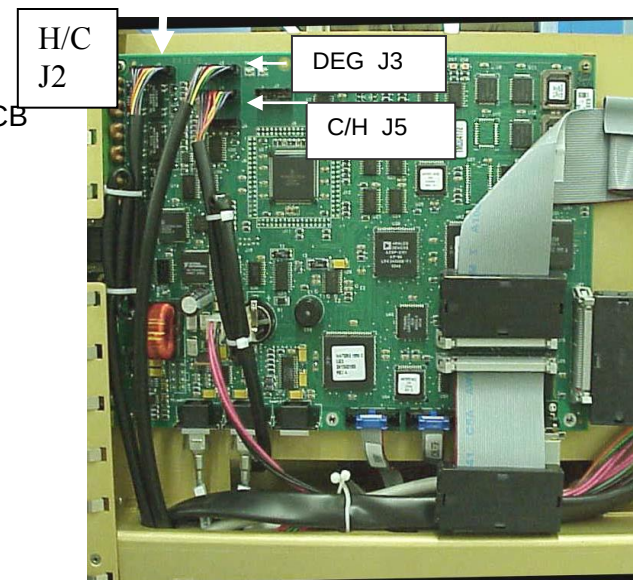
- ✓ For degasser: Connect cable (WAT270354) to J3 of CPU and route with power cable into purse ties located underneath the sample compartment.

NOTE: For "Heater Cooler Option only"- connect (3rd) option cable (WAT270354) to J2 of CPU. Route with power cable downward and leave loose.

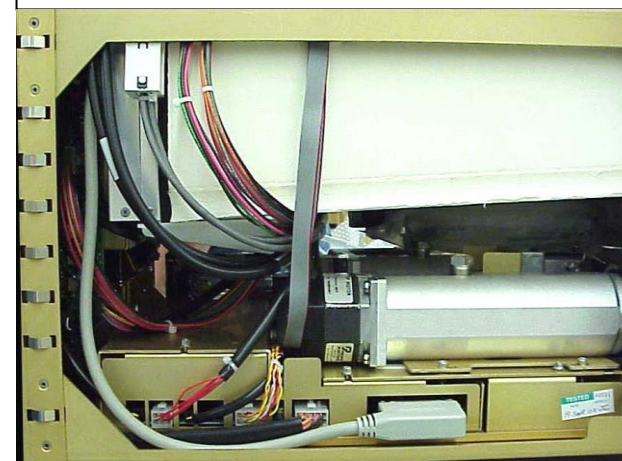
- ✓ Cable tie-wrap the extra option cables as shown.

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT270354	2	ASSY, CABLE CPU TO DEGAS
WAT027033	4	TIE, MINIATURE CABLE.

TOOL NUMBER/DESCRIPTION



Note Primary and Accumulator positions when installing the encoder and transducer cables.



<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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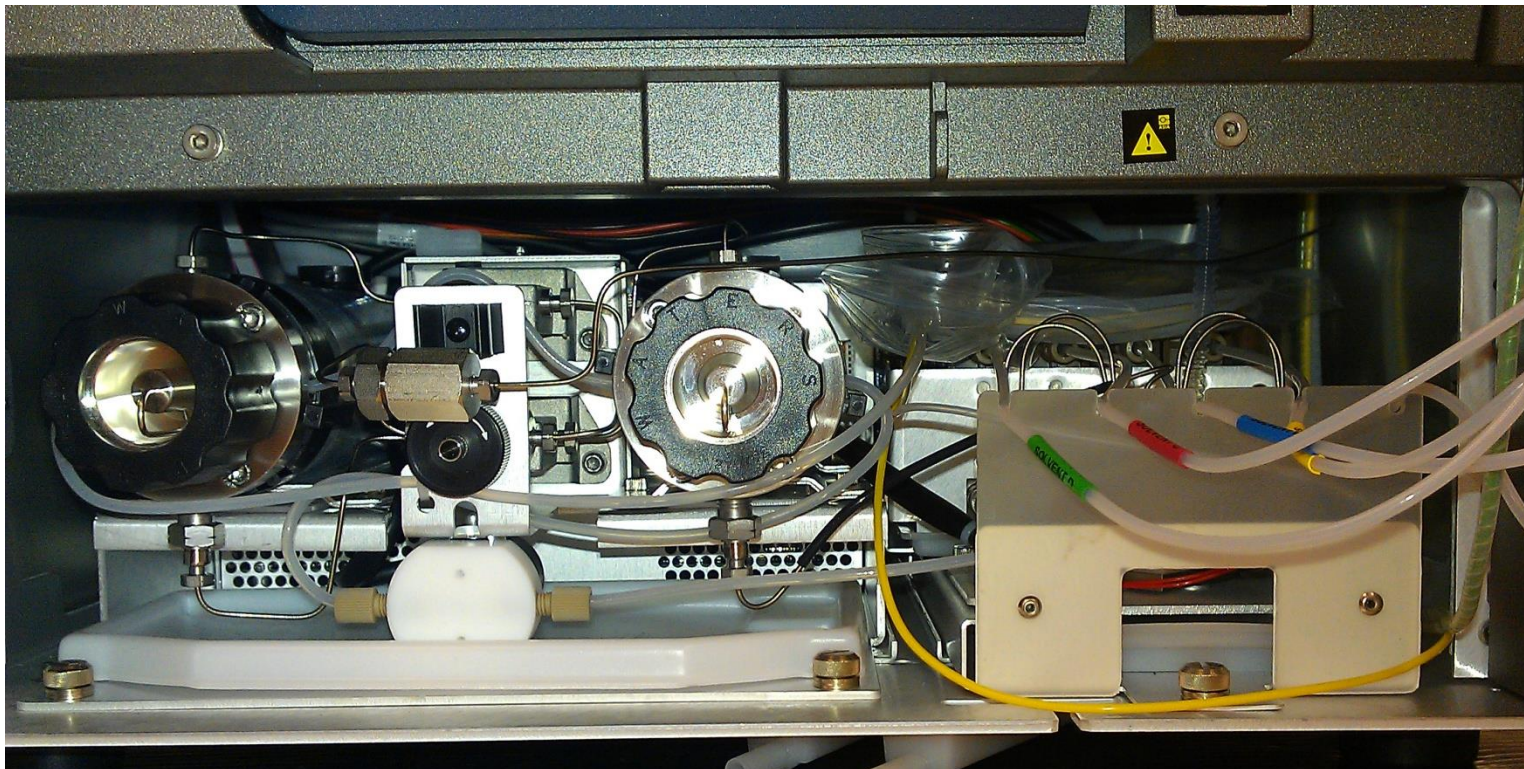
48.0	<u>Degasser Tray Installation</u>	
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Slide the degasser tray to the right of the pump tray.

NA

<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
WAT271087	1	MFG DEGASSER OPTION

- 48.1 Connect the power and option cable to the degasser PCB
Capture the cables in the hooks on the sample compartment
drip tray. Route the GPV cable to the back, capture in hooks
and plug into the pump driver board. Secure tray to chassis.

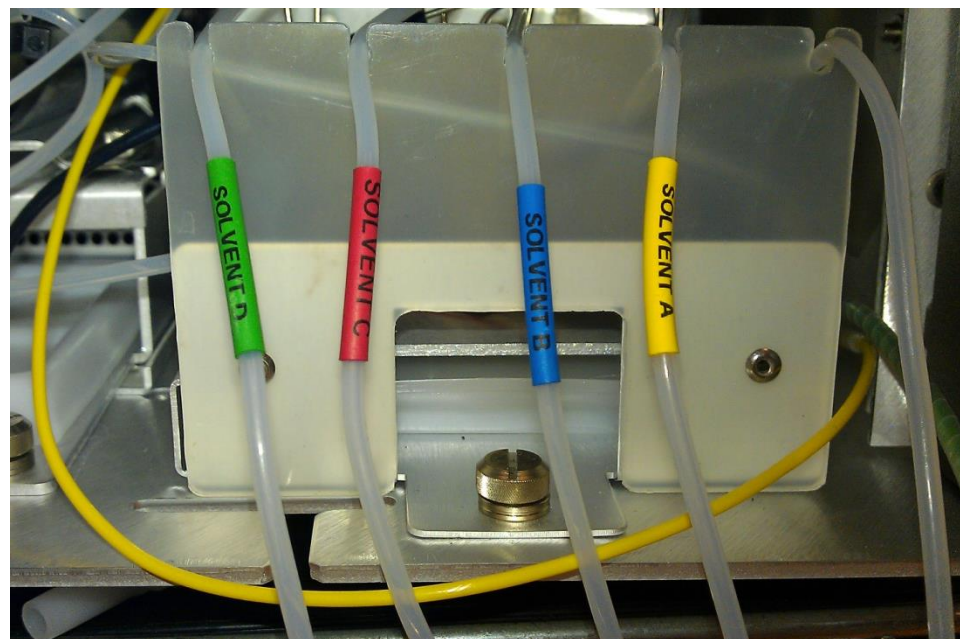
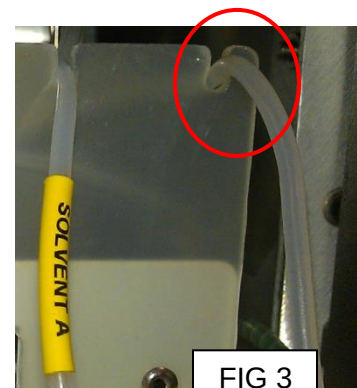


<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
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48.2 Dressing of the Solvent & Waste lines

- Route the solvent lines A, B, C, D, the pump wash line, & the injector green line up through the Syringe Compartment. NA
- Route the tubings behind the lower retainer clip and up through the hole in the top of Bezel. Tie wrap tubings mid-point. **(FIG 1)**
- Press the pump solvent line into the tube holder on the degasser tray as shown. **(FIG 3)**

48.3 Route the clear and yellow waste lines out the front of the chassis. **(FIG 2).**



<u>OPER</u>	<u>OPERATION DESCRIPTION</u>	<u>TOOL NUMBER/DESCRIPTION</u>
49.0	Use Lower Vial Sensor Fixture -2690- (999029646) to check the vial sensor tube has maintained the correct position as instructed on step 5.0.	999029646 LOWER VIAL SENSOR FIXTURE -2690-
50.0	Insert badge into pocket of syringe door 415002696. Remove the adhesive backing from the back of the badge and locate badge locking tabs into tab holes of door. Apply light pressure to adhere badge to door.	
<u>PART #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
415002408	1	BADGE, ALLIANCE X, W/PSA

