

Author: R. Chin



Verify



Scan



Torque



Critical Clean



Electrostatic

Rev “J” INCLUDED PER (ECR 9220526)

- OPER 13.0, update P/N 289010621 to 289012501 and edit picture to reflect different tag. (ECR 9220526)
- OPER 13.0, update P/N 289010609 to 289012516 and edit picture to reflect different tag. (ECR 9220526)



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 1.0 OPERATION DESCRIPTION PREP DHR FOLDER AND CHASSIS

ITEM	QTY	PART #	DESCRIPTION
1	1	WAT024406	Instrument Label
2	1	N/A	Folder
3	1	WAT024951	Certificate of Functional Perf
4	1	730000709, Appendix 1	Non IVD DHR Checklist
5	1	730001377	Event Record

1.1 Print Instrument Label (item 1) per top level Factory Order for part number 186017000.

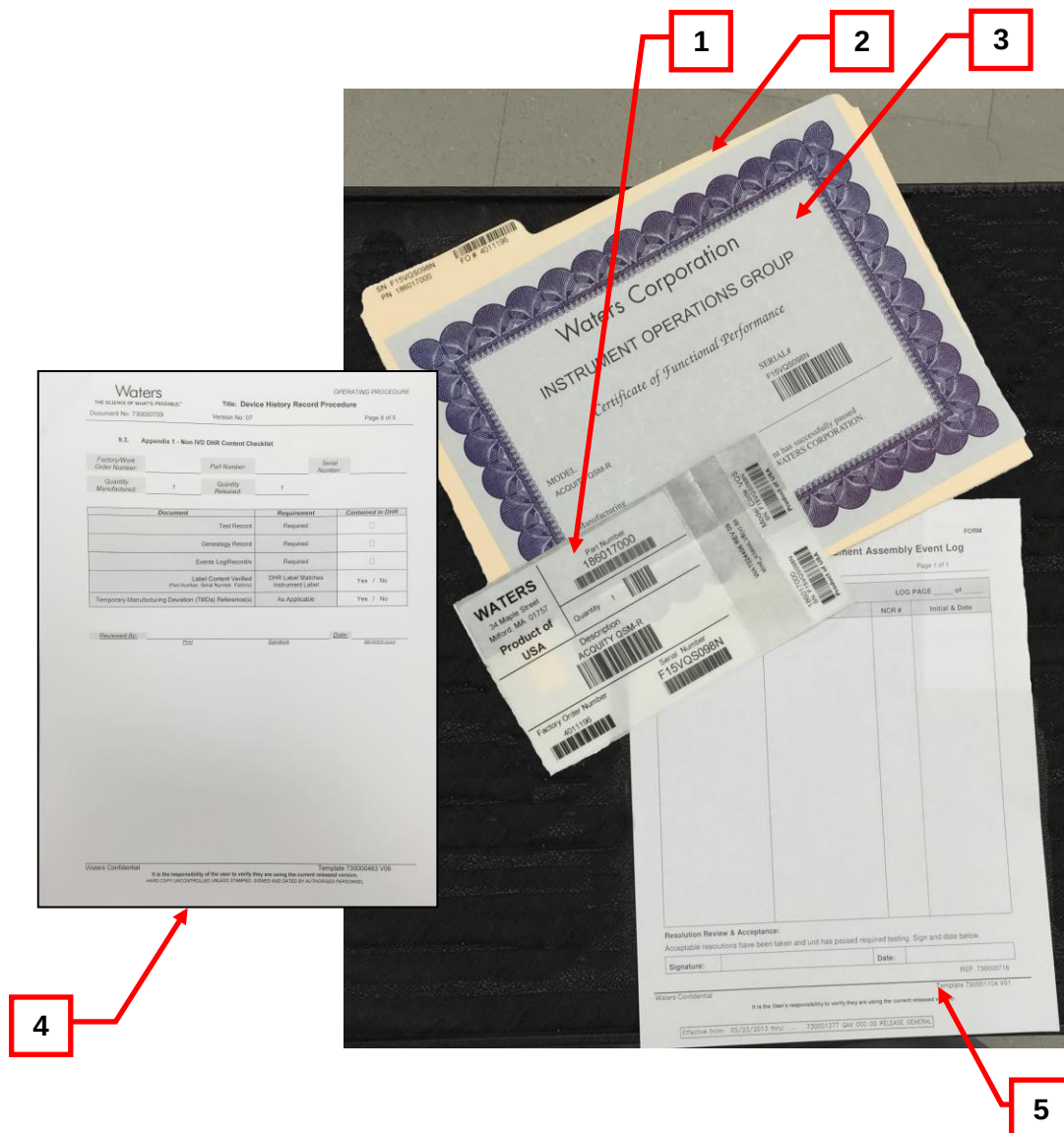
Remove Long Serial Number Label and adhere to Folder (item 2).

1.2 Using the info on the Serial Number Label, create the Certificate of Functional Performance (item 3).

1.3 Print Non IVD DHR Checklist (item 4).

1.4 Print Event Record (item 5)

1.5 Place all items into the Folder.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER
1.0 OPERATION DESCRIPTION
PREP DHR FOLDER AND LABEL
CHASSIS

ITEM	QTY	PART #	DESCRIPTION
1	1	400005822	Lower Chassis
2	1	615003826	ETL Label
3	1	WAT024406	Instrument S/N Label

NOTE: The Lower Chassis is a component of the Chassis Kit 289010629

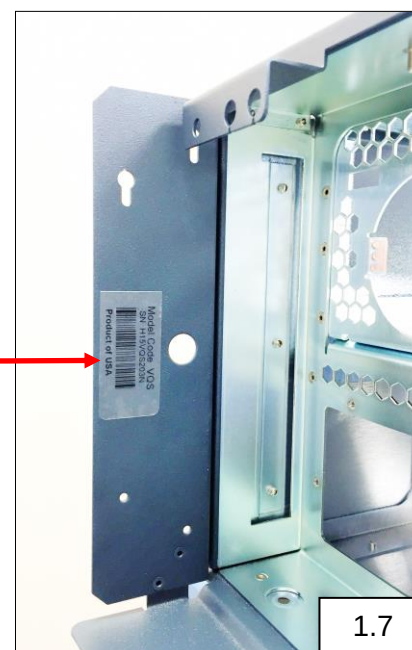
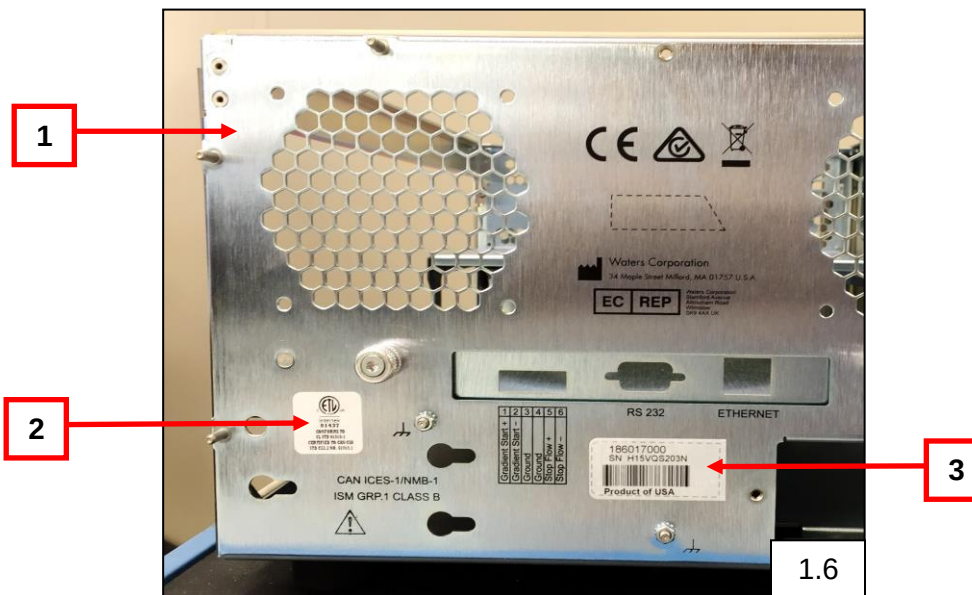
1.6 Adhere the ETL Label to the Chassis rear bulkhead.

Adhere the **small white section** of the Instrument S/N Label to the Chassis rear bulkhead.

1.7 Adhere the **small clear section** of the Instrument S/N Label to the Chassis front bulkhead.

S

Scan the Module serial number into SigmaQuest using Top Level Product 186017000 and Assembly Process Step Build



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION
1.0 PREP DHR FOLDER AND LABEL CHASSIS

ITEM	QTY	PART #	DESCRIPTION
1	1	WAT049630	Caution Label

1.8 Attach a Caution Label to the front bulkhead of the Chassis.



Verify



Scan



Torque



Critical Clean

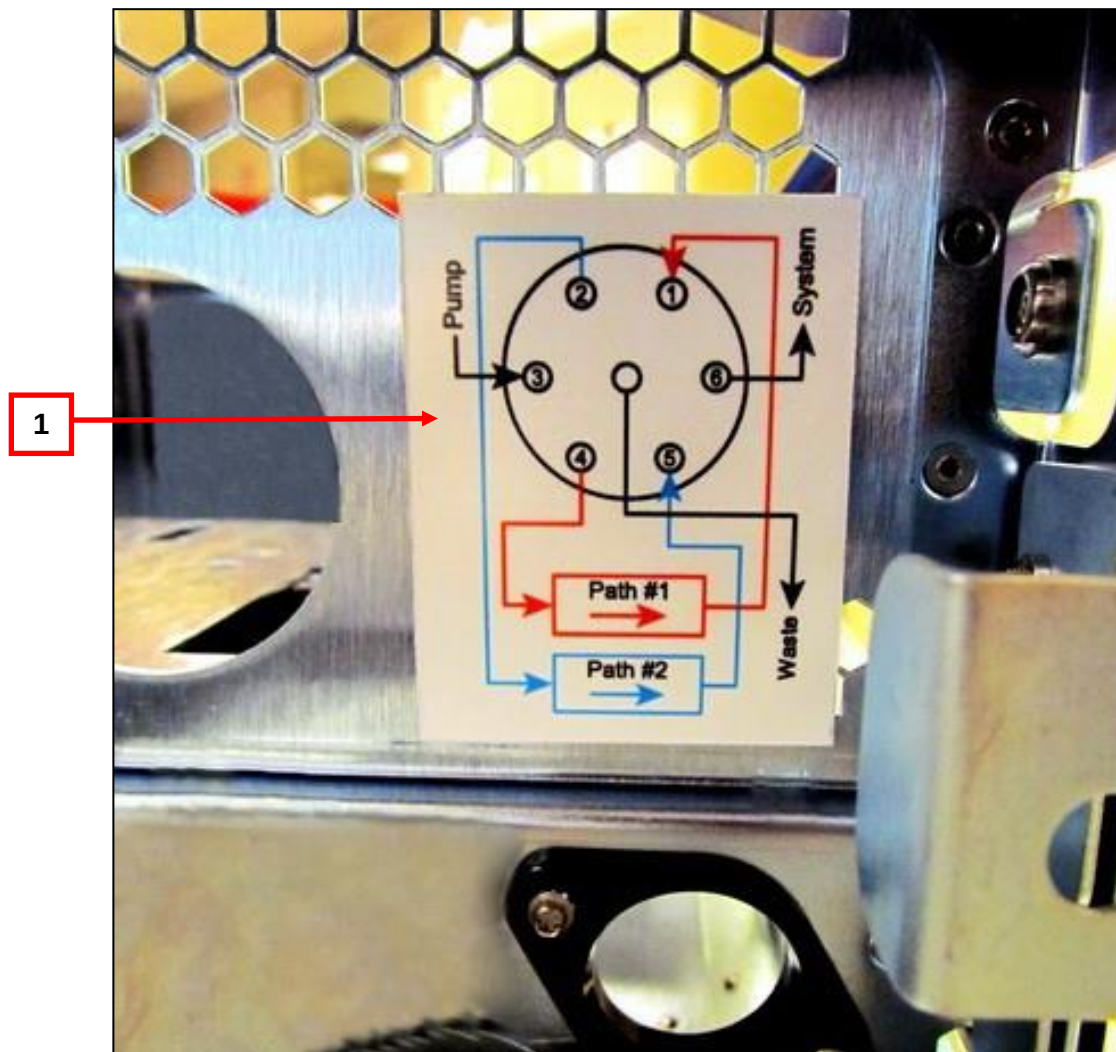


Electrostatic

OPER OPERATION DESCRIPTION
1.0 PREP DHR FOLDER AND LABEL CHASSIS

ITEM	QTY	PART #	DESCRIPTION
1	1	615004708	Magnetic Label

1.9 Attach Magnetic Label to front right of Chassis.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION

2.0 REMOVE PCB BRACKET

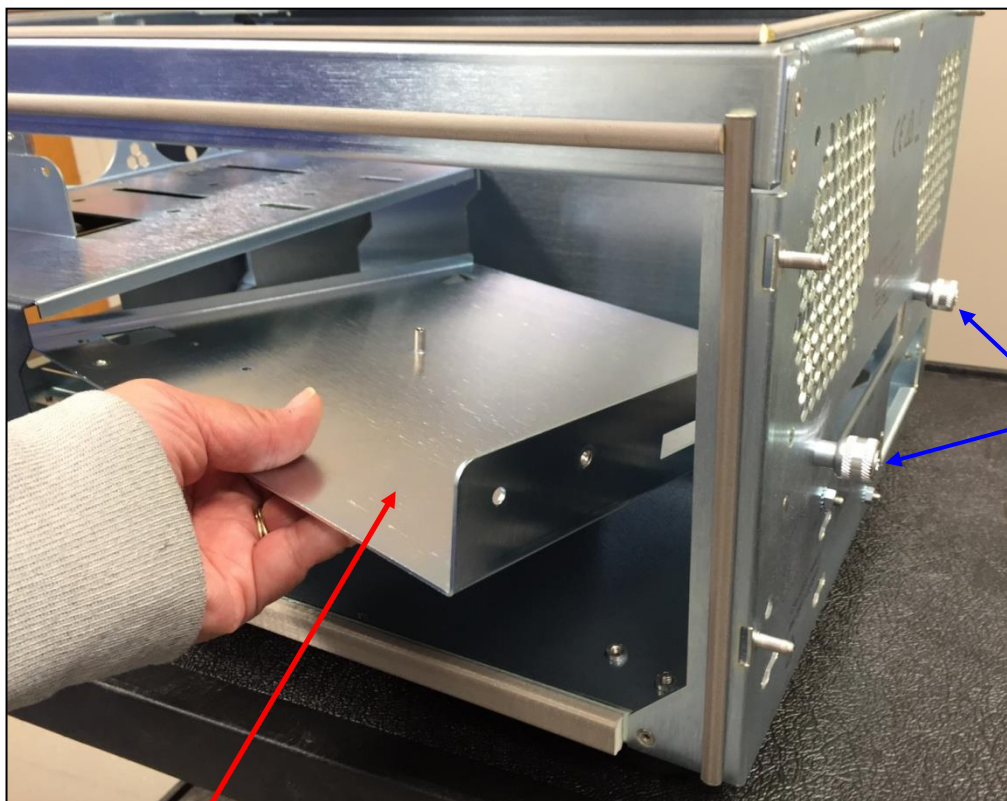
ITEM	QTY	PART #	DESCRIPTION
1	1	400006183	PCB Bracket

TOOL #	DESCRIPTION
N/A	T20 Driver

NOTE: The PCB Bracket is a component of the Chassis Kit 289010629

- 2.1 Remove PCB Bracket from Chassis by loosening the Captive Screws on rear of Chassis.

Set Bracket aside for later use.



1

Captive
Screws



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 3.0 OPERATION DESCRIPTION
PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD

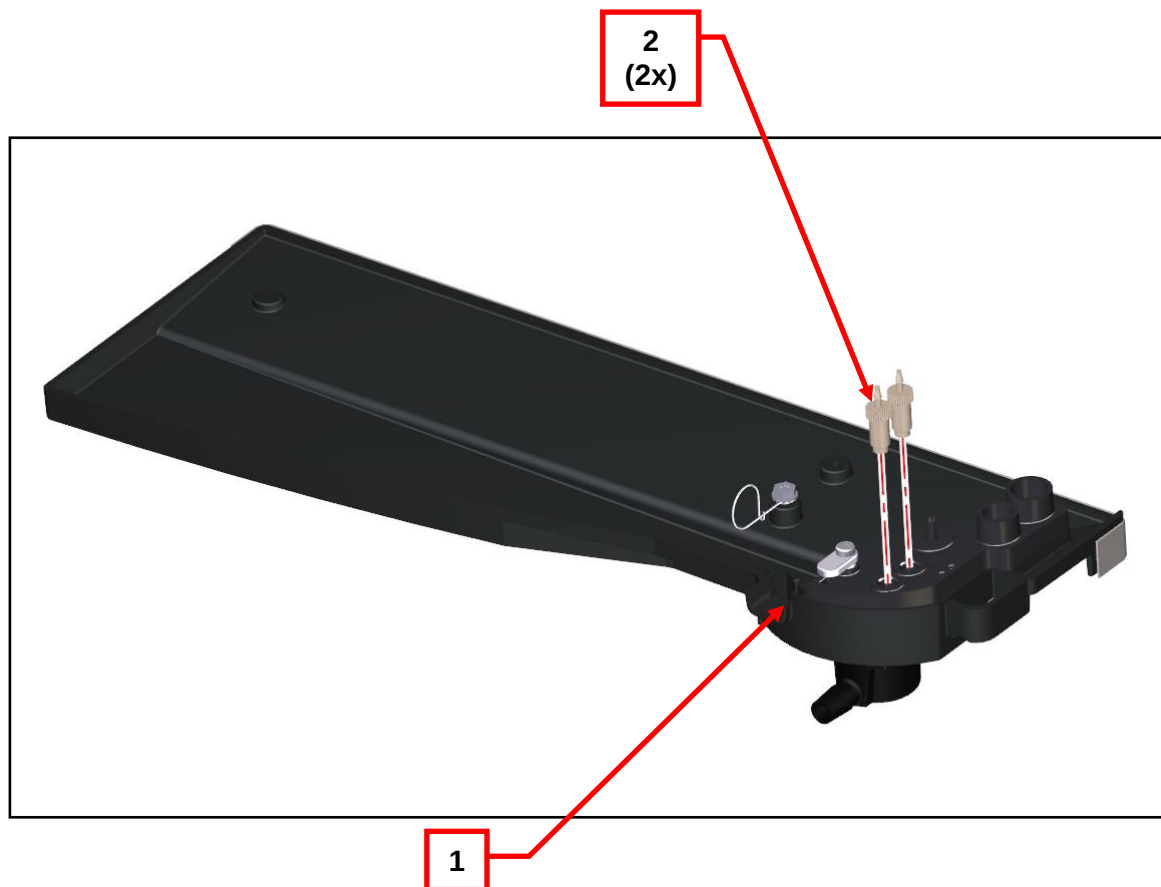
ITEM	QTY	PART #	DESCRIPTION
1	1	289010185	ASSY, DRIP TRAY
2	2	405003015	FITTING, BARBED

TOOL #	DESCRIPTION
N/A	T10 Driver

NOTE: The Barbed Fittings are components of the Drip Tray Assembly 289010185

3.1 Install Barbed fittings to drip tray and finger tighten

NOTE: Drip Tray can be assembled prior to start of unit build, or at any time during the build procedure.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER **OPERATION DESCRIPTION**
3.0 **PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD**

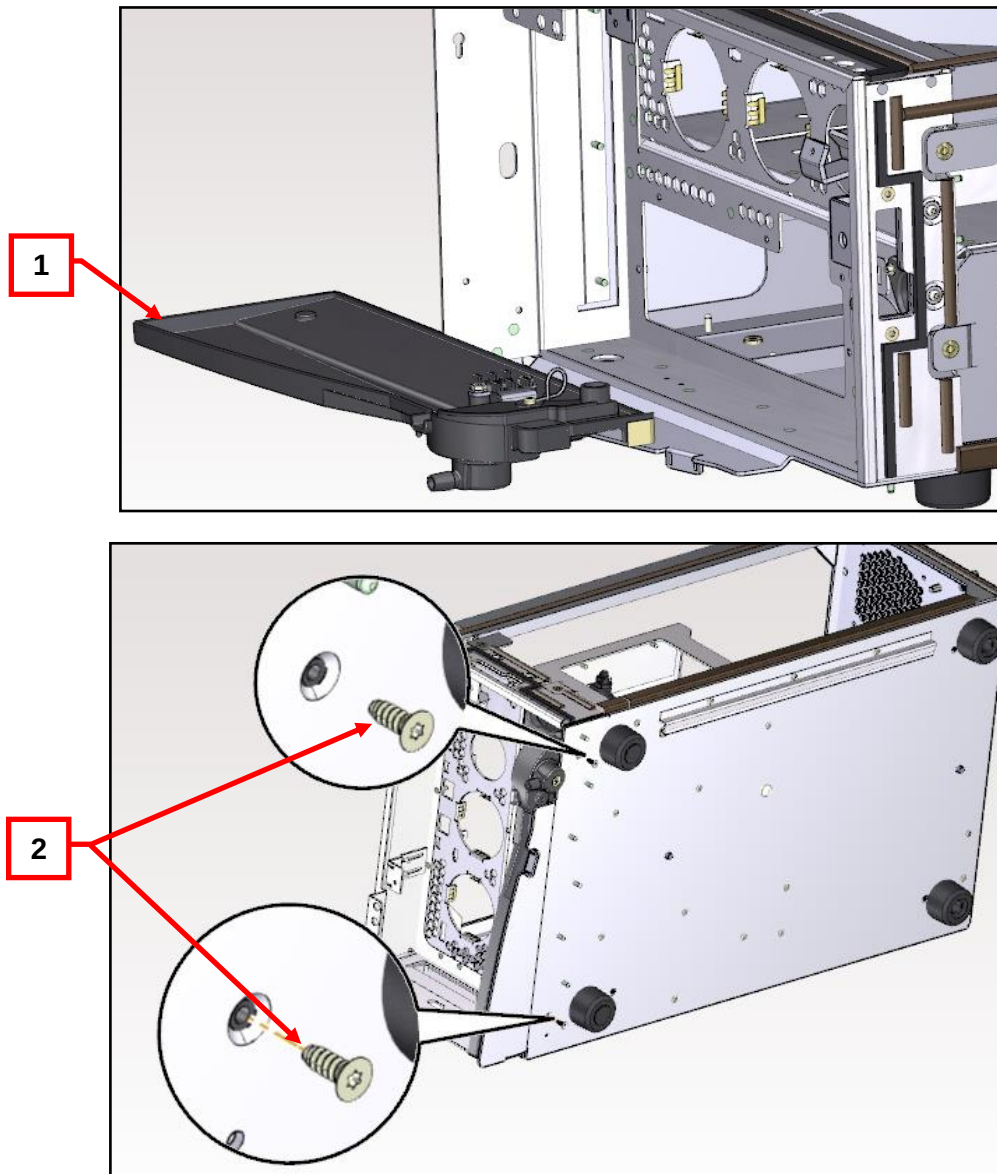
ITEM	QTY	PART #	DESCRIPTION
1	1	289010185	ASSY, DRIP TRAY
2	2	410003087	SCREW, PLASTITE, #6-20 X 3/8"

TOOL #	DESCRIPTION
N/A	T10 Driver

3.2 Peel backing from foam tape on the Drip Tray and place Drip Tray into Chassis.

NOTE: The Drip Tray must be positioned as LOW and as FAR LEFT as possible on the front bulkhead before the foam tape touches the sheet metal.

3.3 Secure Drip Tray to Chassis with Screws.



Verify



Scan



Torque



Critical Clean



Electrostatic

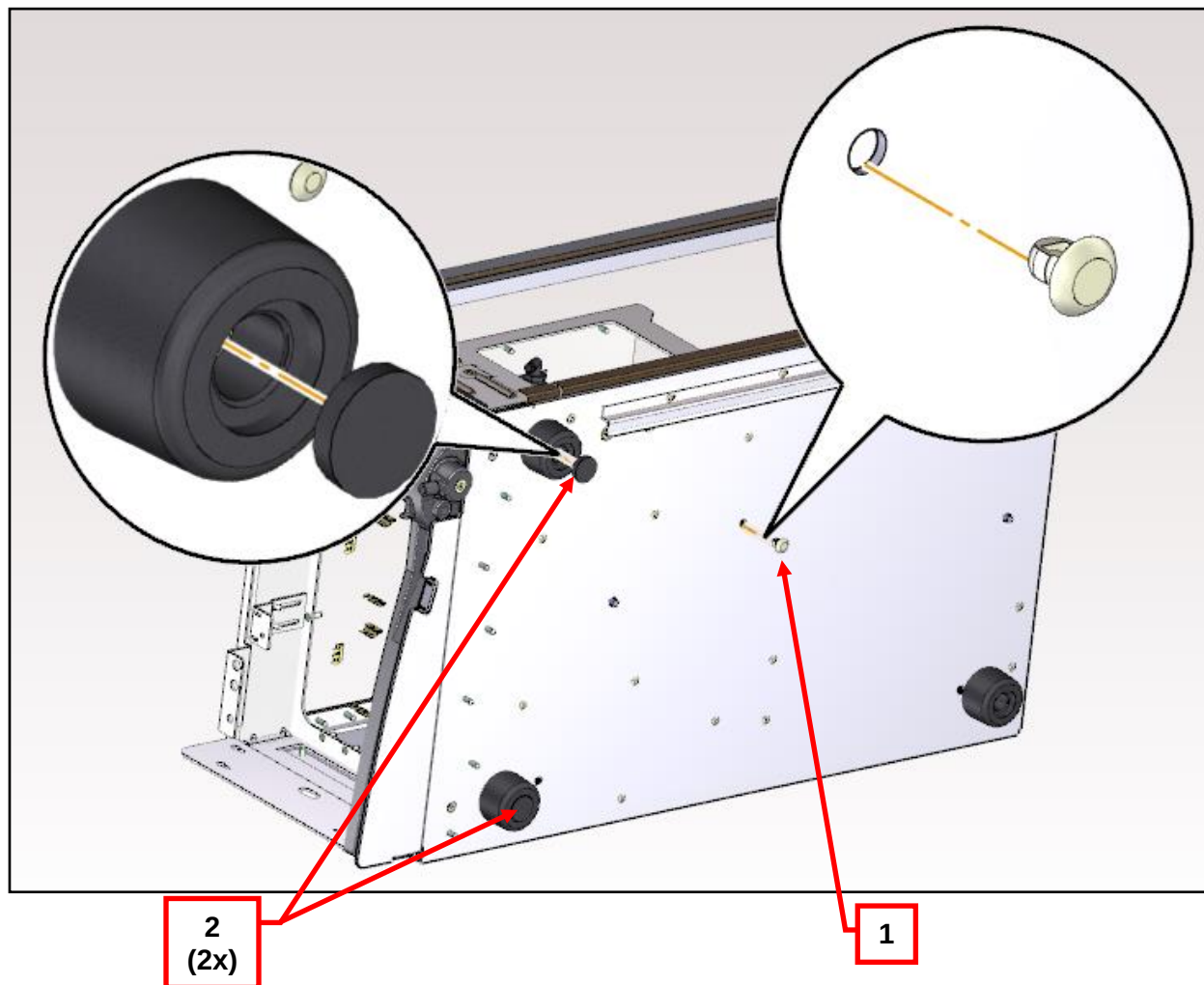
730001259 V 00 Page 9 of 81

OPER OPERATION DESCRIPTION
3.0 PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	1	410002180	Push-in Holder
2	2	WAT212369	Bumper

3.4 Install the Push-in Holder into the Chassis base

Install Bumpers onto the TWO FRONT FOOT LOCATIONS.



Verify



Scan



Torque



Critical Clean



Electrostatic

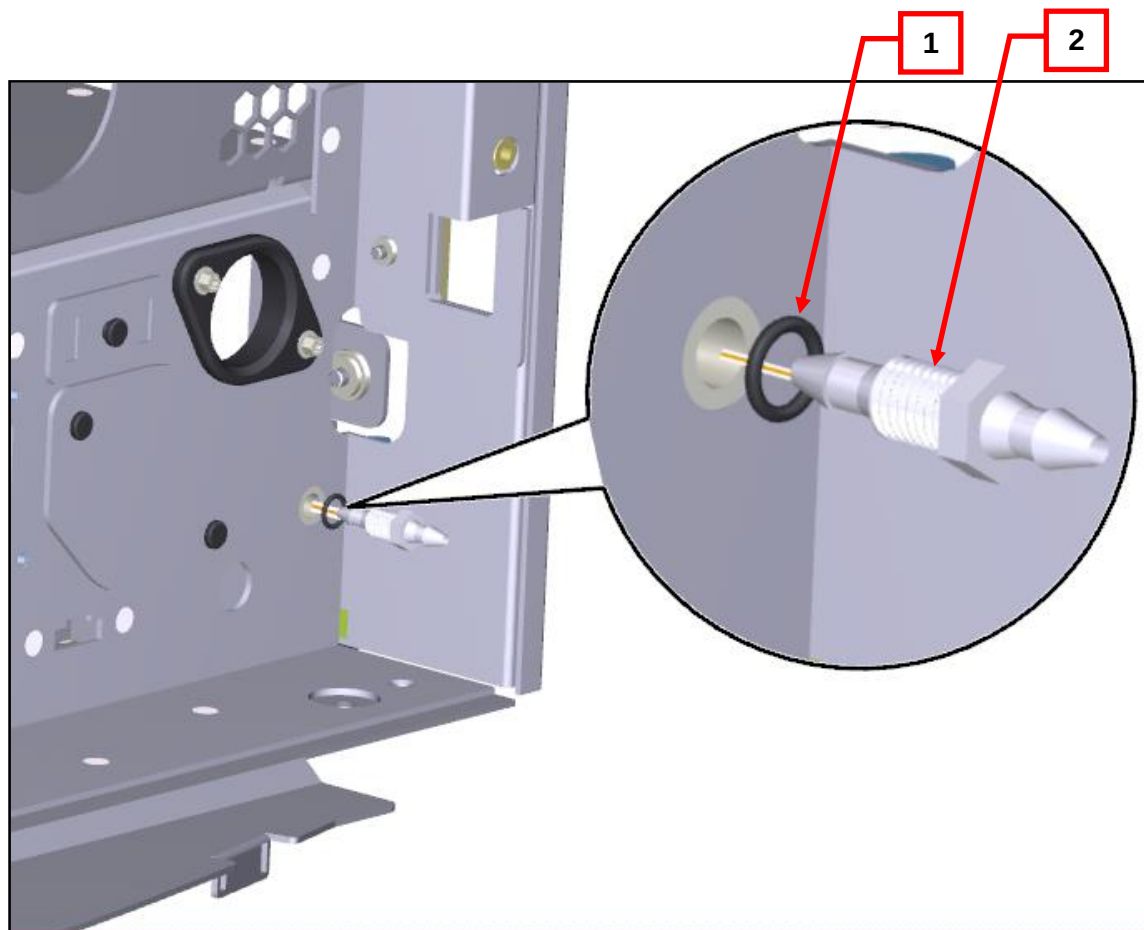
OPER 3.0 **OPERATION DESCRIPTION**
PREP UNDERNEATH CHASSIS AND
FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	1	425000122	O-Ring
2	1	410004929	Barb Fitting

TOOL #/	DESCRIPTION
N/A	5/16" Nut Driver (or equiv)

3.5 Install the Barb Fitting and the O-ring
through the front bulkhead of the Chassis.

Tighten until o-ring starts to compress.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 3.0 OPERATION DESCRIPTION
PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	42"	430002328	Santoprene Tubing
2	1	WAT027033	Cable Tie
3	1	WAT072718	6 x 8 Ziplock Bag

TOOL #	DESCRIPTION
N/A	Razor Blade or Equivalent
N/A	Measuring Tape or Equivalent

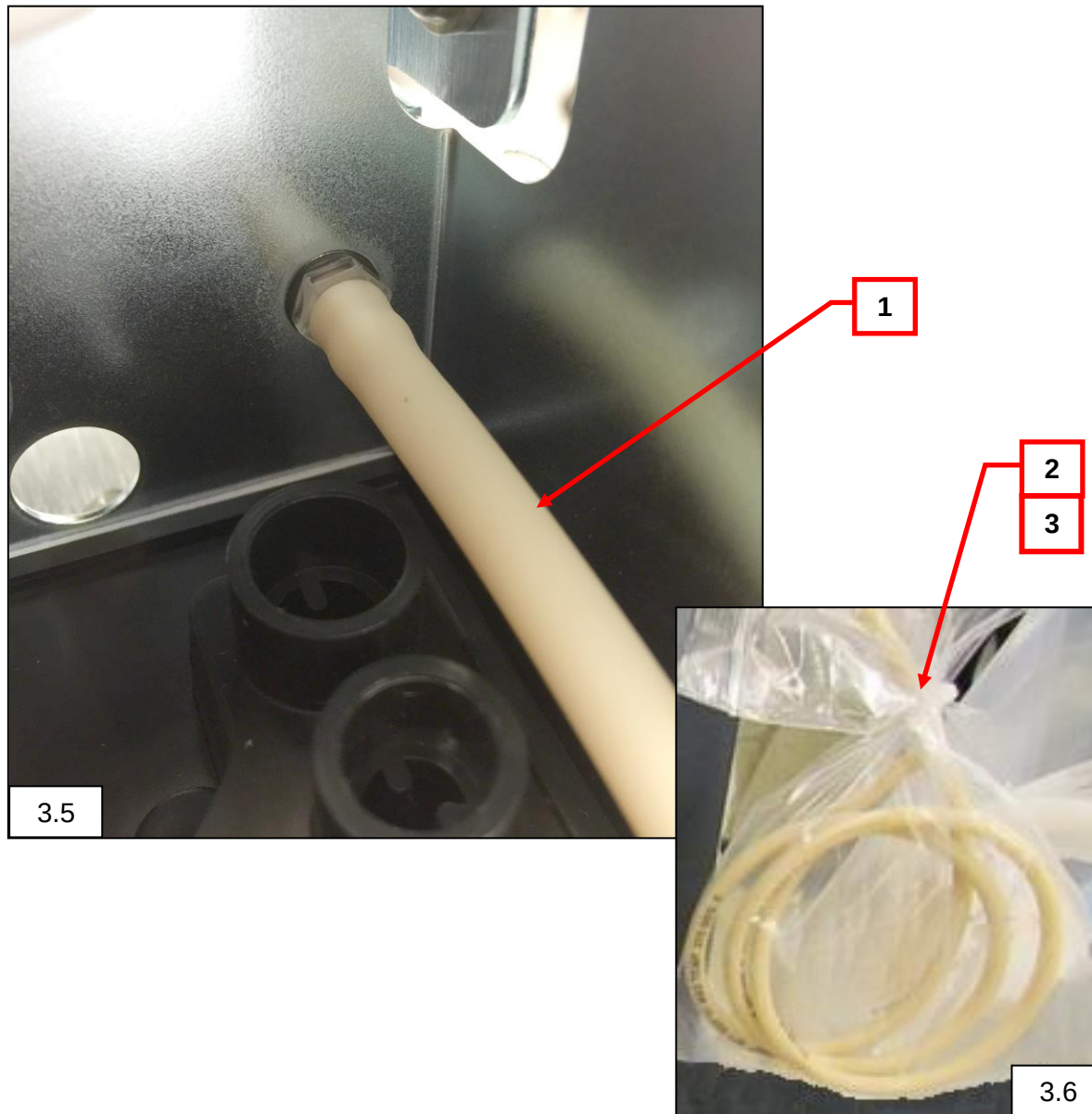
3.6 Cut Tubing to 42 inches and assemble onto the Barb Fitting in the lower right corner of the front bulkhead.

3.7 Coil the tubing and place in a 6 x 8 Ziplock Bag.

Tie Wrap the Bag around the Tubing, leaving ~12" exposed between the front panel and the Cable Tie,

DO NOT CONSTRICT TUBING

NOTE: Tubing can be cut and bagged prior to start of unit build, or at any time during the build procedure.



Verify



Scan



Torque



Critical Clean



Electrostatic

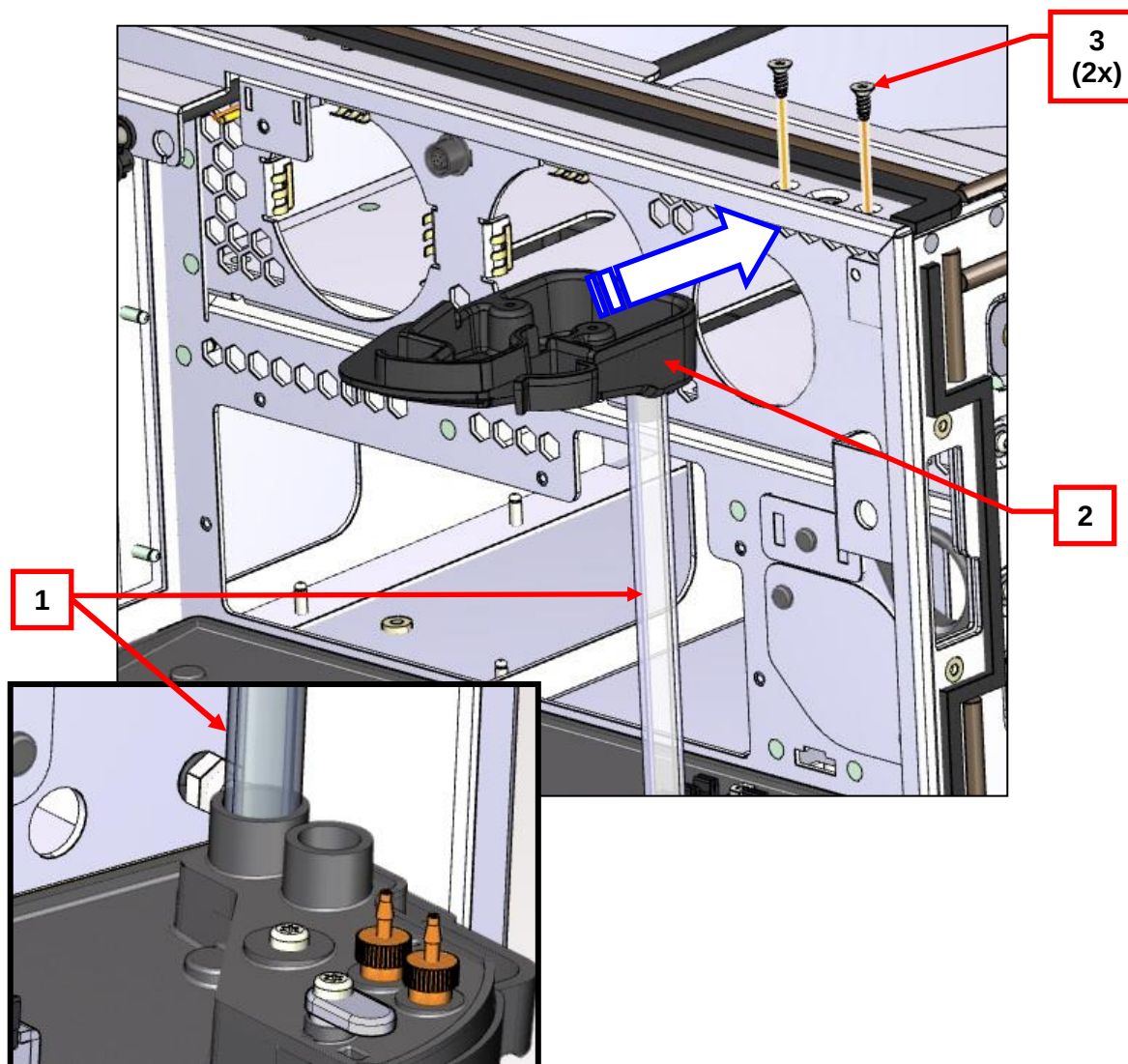
<u>OPER</u>	<u>OPERATION DESCRIPTION</u>
3.0	PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	6.5"	430000525	Tygon Tube
2	1	415001454	Top Drip Tray
3	2	410003087	Plastite Screw

TOOL #	DESCRIPTION
N/A	T10 Torx Driver
N/A	Razor Blade or Equivalent
N/A	Measuring Tape or Equivalent

- 3.8 Cut a piece Tygon Tubing to 6.5 inches
- Push one end of the Tygon Tube onto the Top Drip Tray.
- NOTE: Tubing can be cut prior to start of build, or at any time during the build.**
- NOTE: This subassembly can be assembled prior to start of the unit build, or at any time during the build procedure.**
- Feed the lower end of the Tygon Tube into the rear socket of the Drip Tray.
- 3.9 Locate this assembly in the Chassis, and secure with (2) Screws through the top side of the Chassis.

NOTE: TUBING MUST FIT SECURELY INTO BOTTOM DRIP TRAY.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER
3.0 OPERATION DESCRIPTION
PREP UNDERNEATH CHASSIS AND
FRONT BULKHEAD

3.10 Route the 42" Santoprene Tubing through
the top Drip Tray.



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 14 of 81

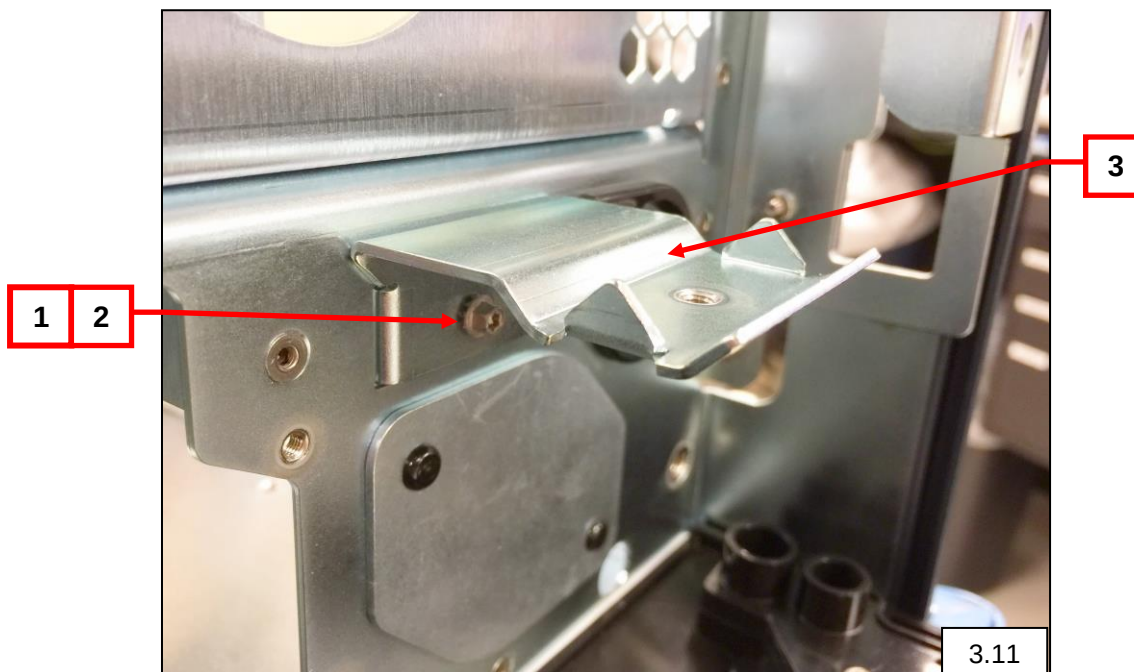
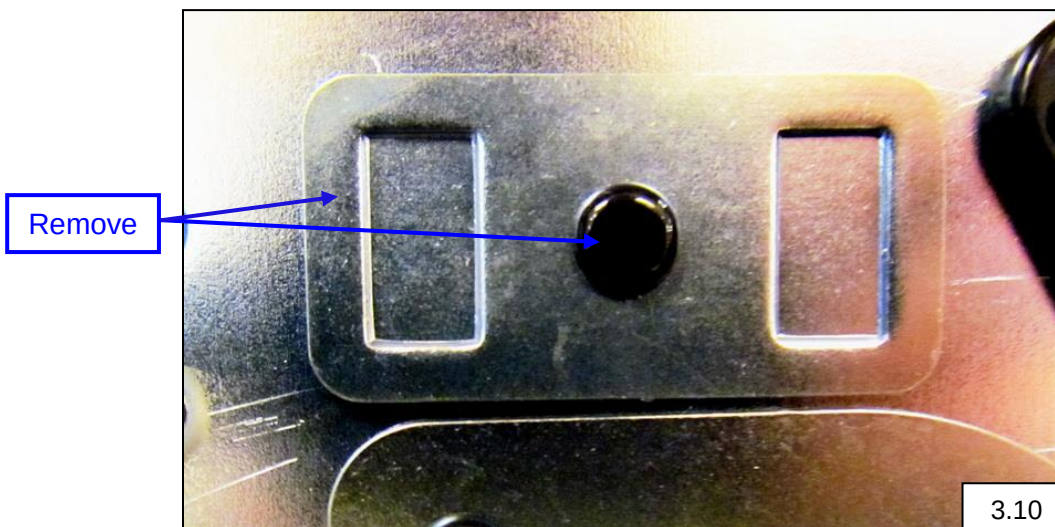
OPER 3.0 OPERATION DESCRIPTION
PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	1	410000272	M3 Sems Screw
2	1	WAT025817	M3 Keps nut
3	1	400007225	Top Mixer Bracket

TOOL #	DESCRIPTION
N/A	5.5 mm Wrench (or equiv)
N/A	T10 Torx Driver

3.11 Remove and discard Plate and Rivet from front of Chassis.

3.12 Using a screw and nut, attach the Mixer Bracket to the Chassis.



Verify



Scan



Torque



Critical Clean



Electrostatic

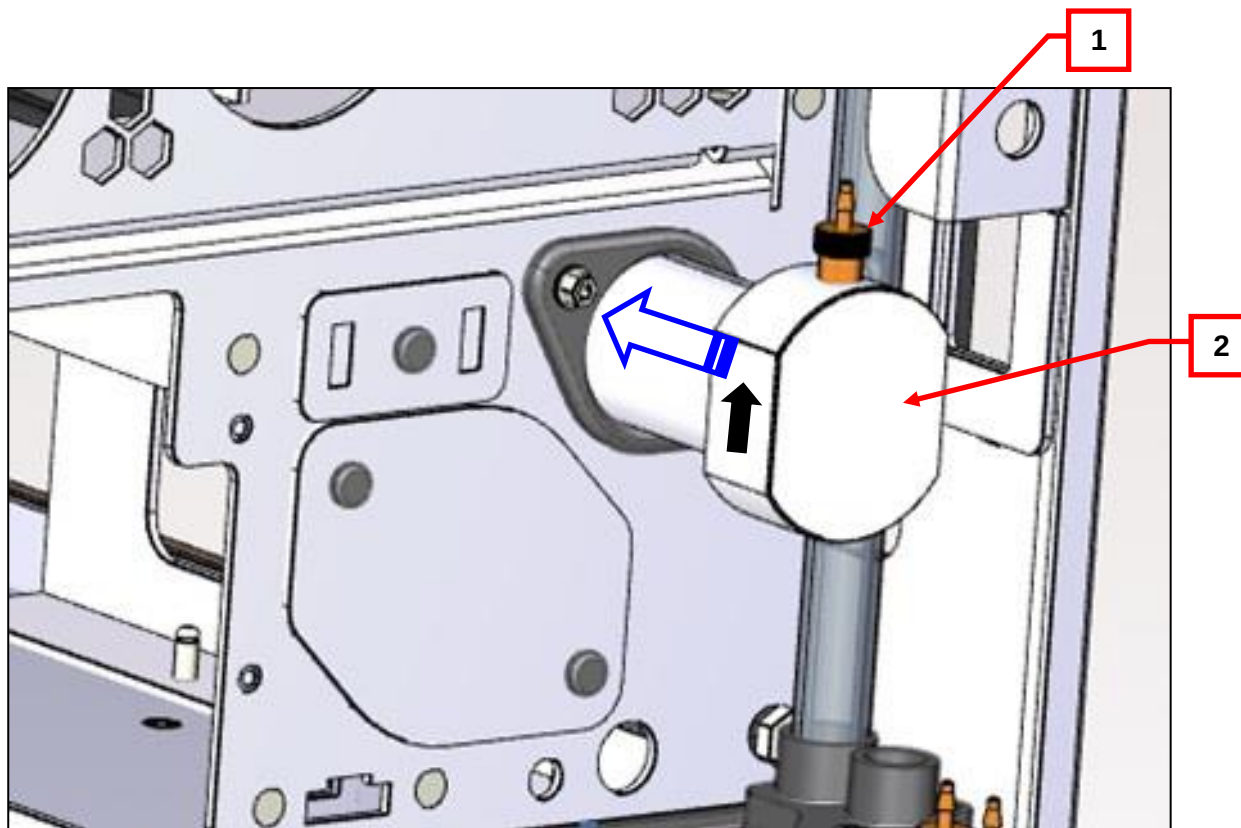
OPER 3.0 OPERATION DESCRIPTION
PREP UNDERNEATH CHASSIS AND
FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	1	405003015	Barbed Fitting
2	1	279003098	Pump, Solenoid

3.13 Install the Barbed Fitting, finger tight, to outlet side of the Solenoid Pump.

NOTE: This subassembly can be assembled prior to start of the unit build or at any time during the build procedure.

Orient the Solenoid Pump so that the flow arrow is UP, and feed the Pump Solenoid through the front side of the Chassis.



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 16 of 81

OPER **OPERATION DESCRIPTION**
3.0 **PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD**

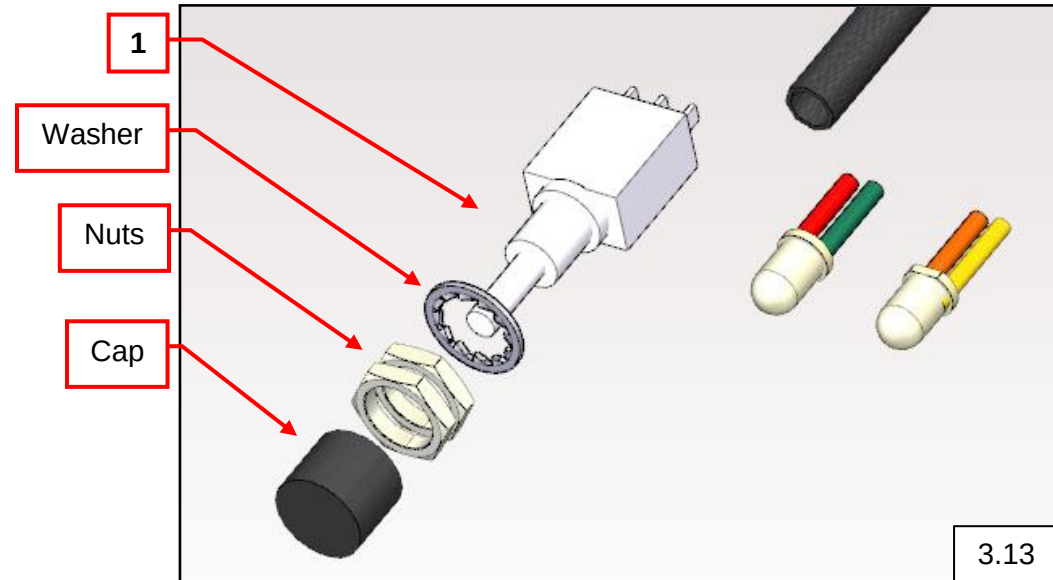
ITEM	QTY	PART #	DESCRIPTION
1	1	441000973	Pwr-Stat Cable
2	2	410000864	LED Holders

TOOL #	DESCRIPTION
999028339	Cap Removal Tool
999027063	LED Homing Pliers

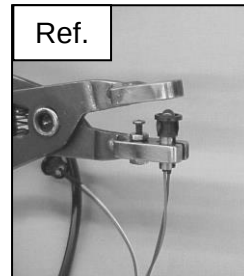
3.14 Use the Cap Removal Tool to remove the Cap from the Power Switch.

Remove the Nuts and the Washer and set aside along with Cap.

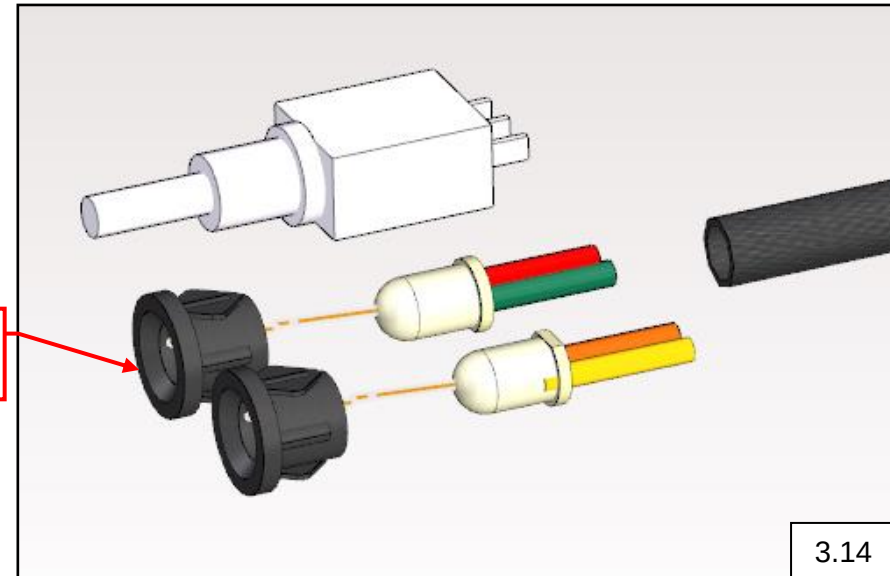
3.15 Use the LED Homing Pliers to secure the LED Holders onto the LED. (See Reference image)



3.13



2
(2x)



3.14



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 17 of 81

OPER 3.0 OPERATION DESCRIPTION
PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	1	415002213	Power Button Cover

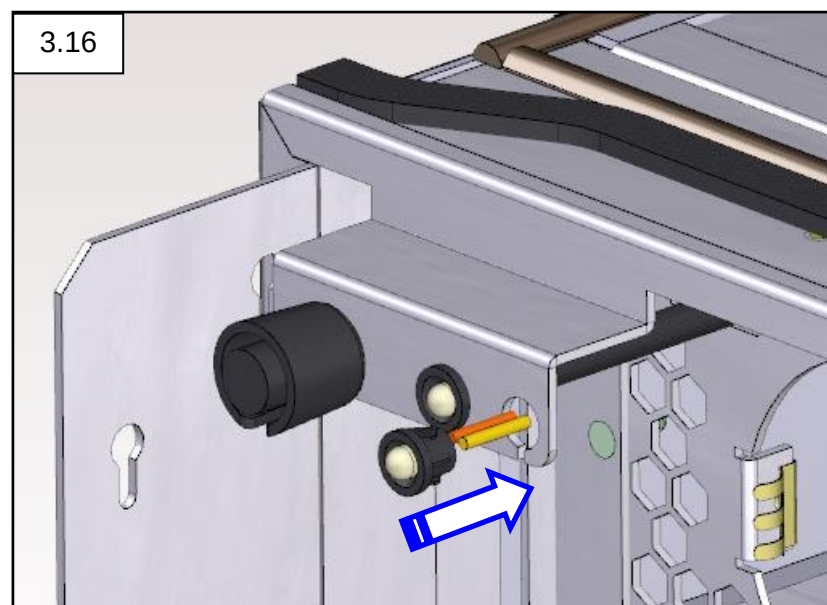
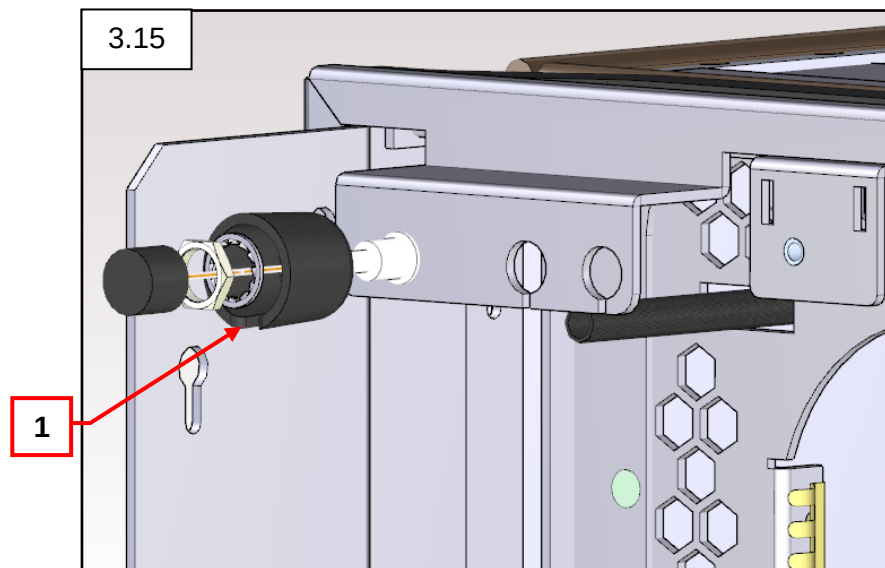
TOOL #	DESCRIPTION
999038882	5/16" Modified Nut Driver

3.16 Feed the Power Status Cable through the rectangular hole in the front bulkhead, and then locate the switch component into the bracket.

Orient the Power Button Cover, **slot side down**, over the Switch component, and then secure with the Washer and one Nut (set aside earlier). Discard the extra Nut.

Reinstall the Cap (set aside earlier) to the Switch.

3.17 Place the two remaining wire sets from the Power Status Cable. The **RED/ GREEN** wire set is placed to the left of the **YELLOW/ ORANGE** wire set.



Verify



Scan



Torque



Critical Clean



Electrostatic

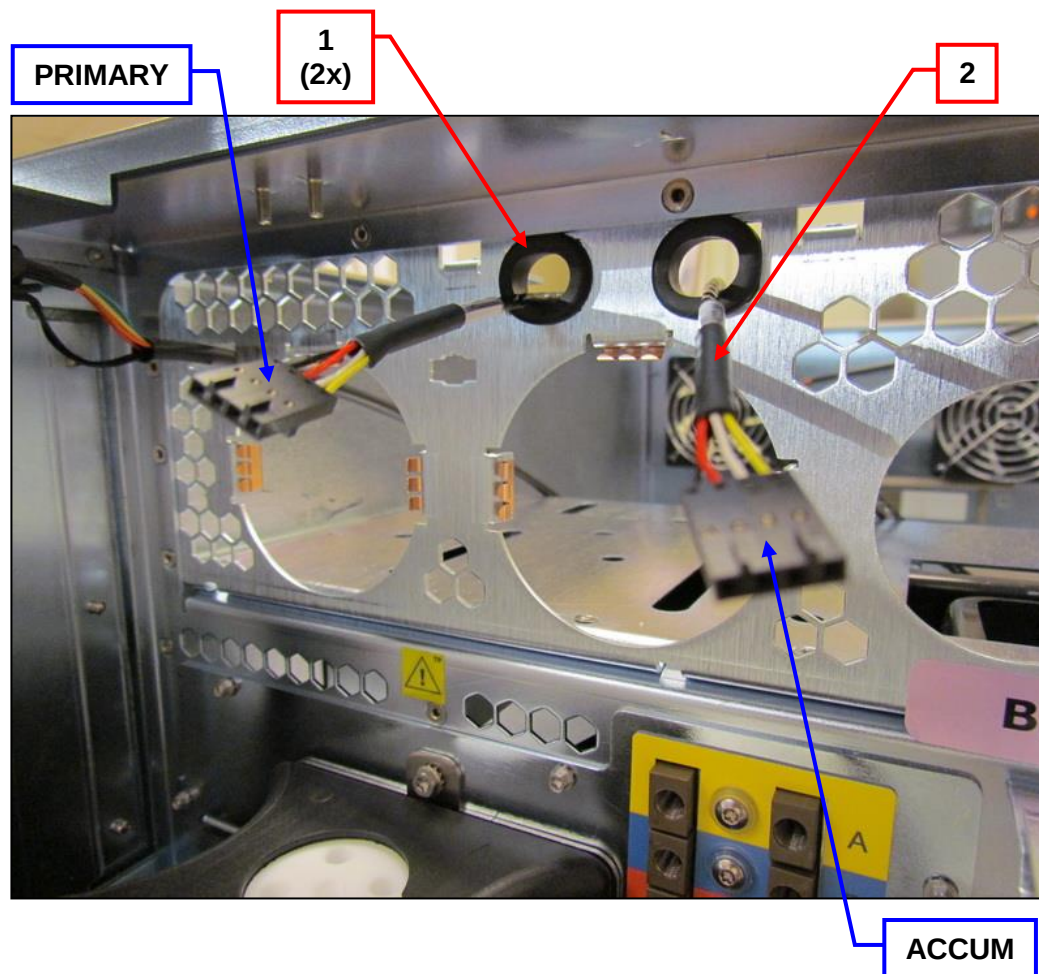
OPER OPERATION DESCRIPTION
3.0 PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	2	410005488	Grommet
2	1	441001631	Xducer Cable

3.18 Install Grommets to Cable access holes in Chassis.

From inside the Chassis, feed the Transducer Cables through the Grommets.

Viewing from the front,
“PRIMARY” goes **to the Left**, and
“ACCUM” (Accumulator) goes **to the Right**.



Verify



Scan



Torque



Critical Clean



Electrostatic

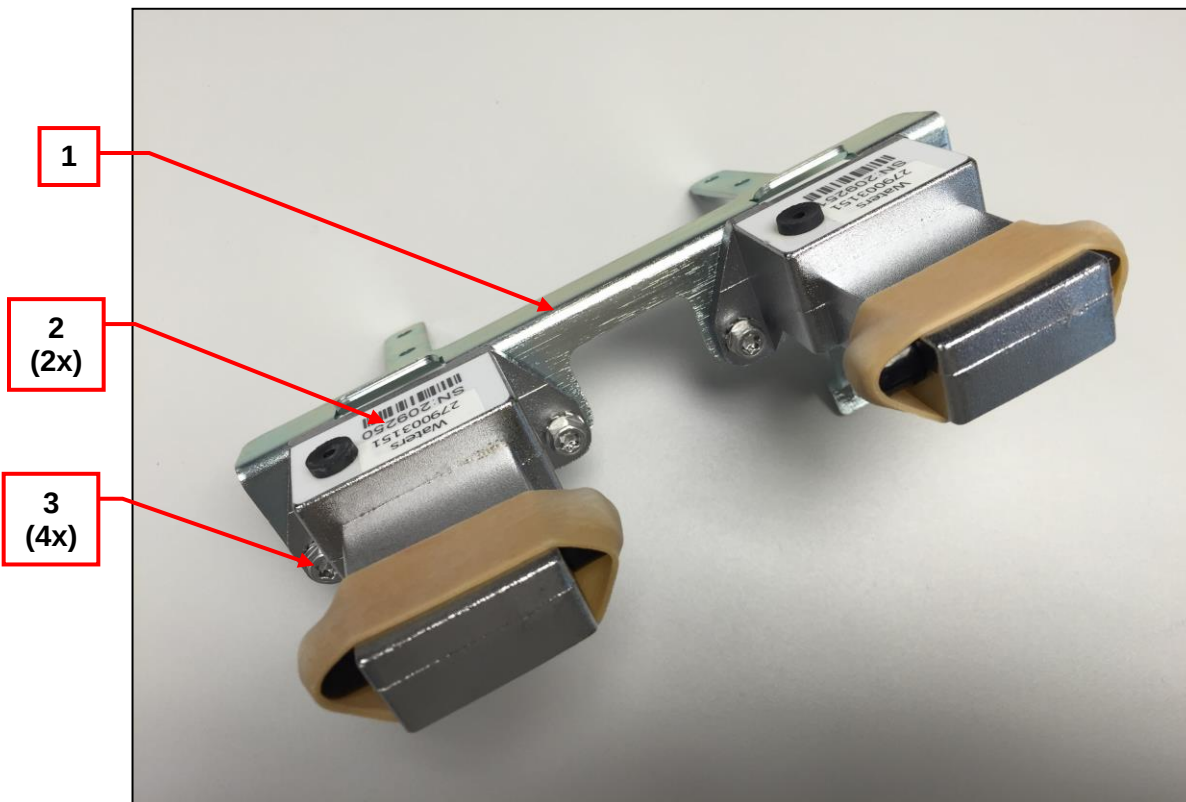
OPER OPERATION DESCRIPTION
3.0 PREP UNDERNEATH CHASSIS AND FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	1	400007206	Xducer Bracket
2	2	279003625	Transducer
3	4	410000419	M4 SEMS Screw

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

3.19 Attach Transducers to Transducer Bracket with (4) Screws.

NOTE: This subassembly can be assembled prior to start of the unit build or at any time during the build procedure.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER
3.0
OPERATION DESCRIPTION
PREP UNDERNEATH CHASSIS AND
FRONT BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	2	410000272	M3 SEMS Screw
2	4	WAT271463	M3 SEMS Screw

TOOL #	DESCRIPTION
N/A	T10 Torx Driver

S

Scan **PRIMARY (Left)** and **ACCUMULATOR (Right)** Transducer serial numbers into SigmaQuest.

3.20 Plug “**PRIMARY**” AND “**ACCUM**” Cables into corresponding Transducers. **Be sure that both Cables fully click into each Transducer Connector.**

Feed Bracket legs through access holes in chassis.

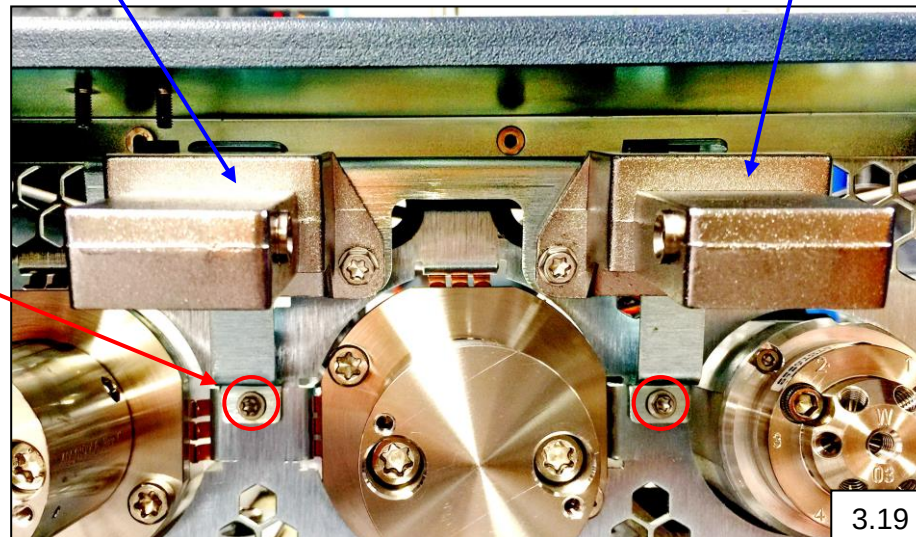
Secure the Bracket to the front of the Chassis with (2) Screws.

3.21 Secure the Bracket to the inside of the Chassis with (4) Screws.

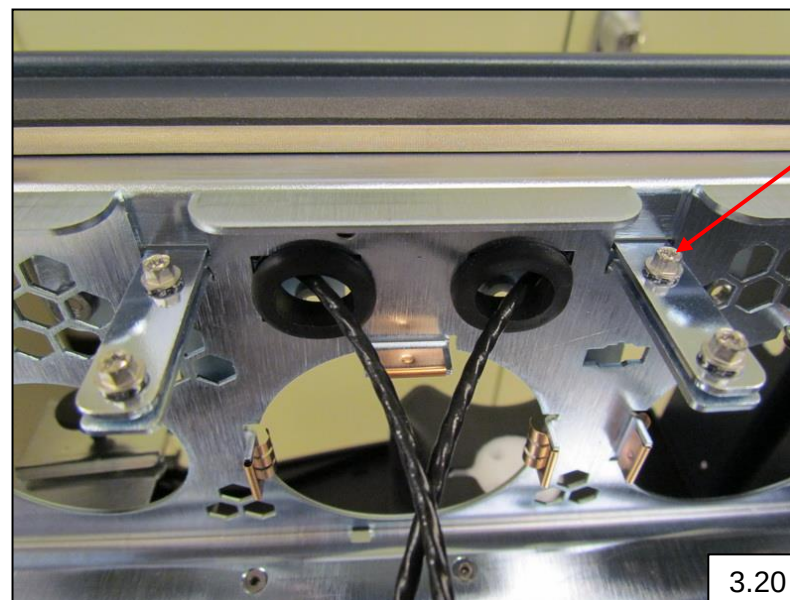
PRIMARY

ACCUMULATOR

1
(2x)



2
(4x)



Verify



Scan



Torque



Critical Clean



Electrostatic

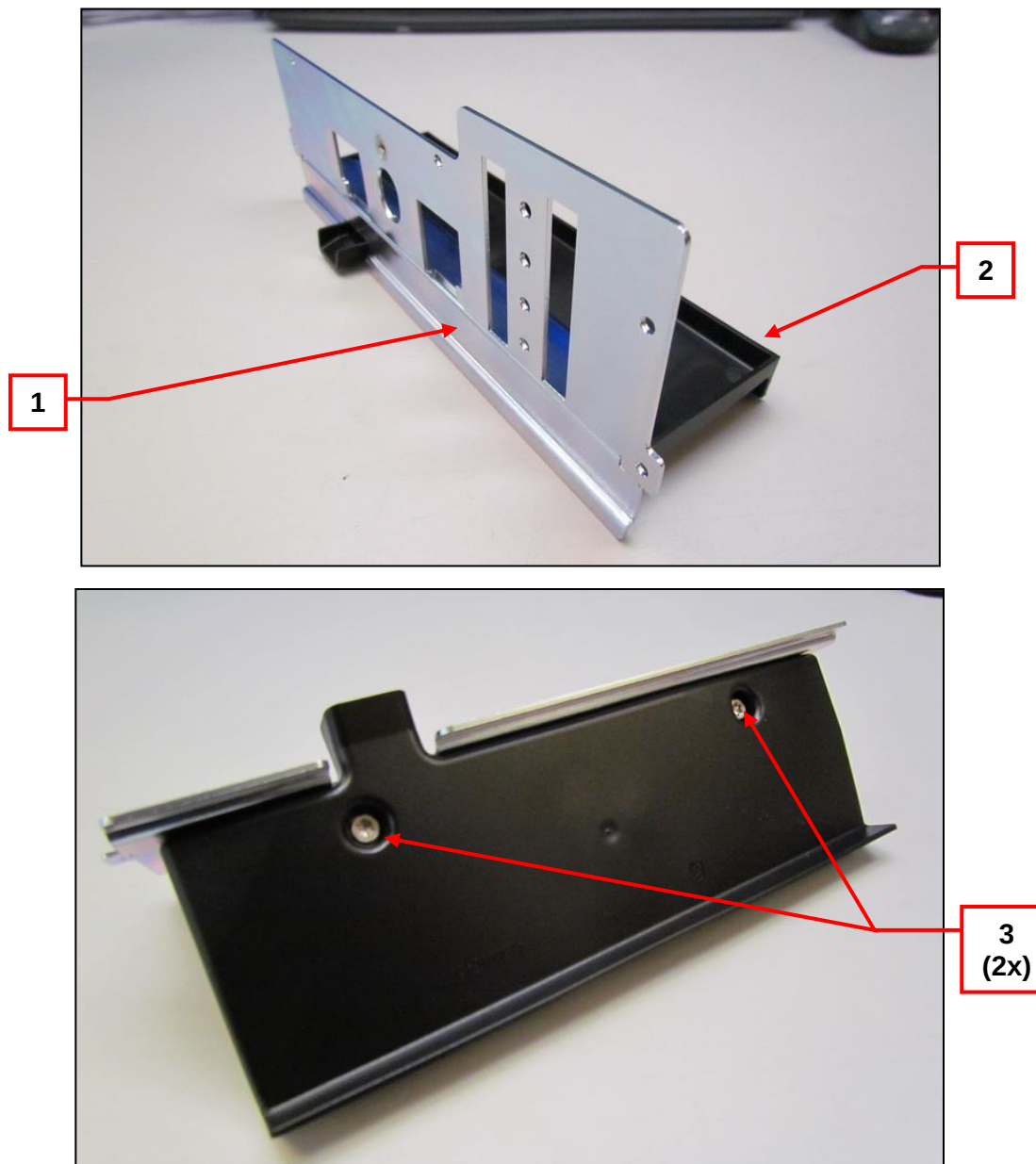
OPER 4.0 **OPERATION DESCRIPTION**
PREP DEGASSER/GPV BRACKET

NOTE: This Degasser/GPV Bracket subassembly, and its components, can be assembled prior to start of the unit build or at any time during the build procedure.

ITEM	QTY	PART #	DESCRIPTION
1	1	400007188	Bracket
2	1	415001645	Drip Tray
3	2	WAT034347	M4 Screws

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

4.1 Install the Drip Tray to the Bracket with (2) Screws.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 4.0 **OPERATION DESCRIPTION**
PREP DEGASSER/GPV BRACKET

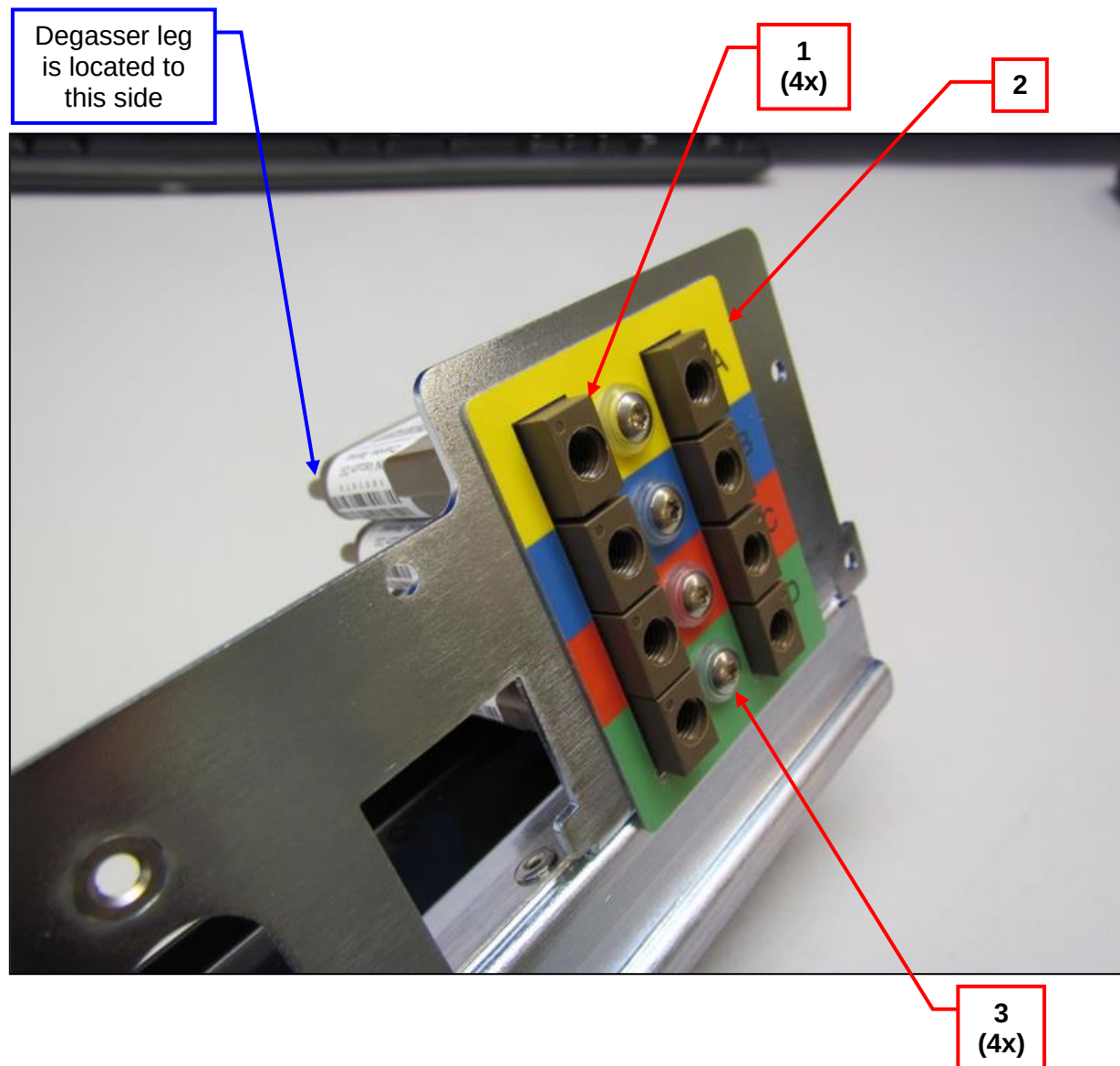
ITEM	QTY	PART #	DESCRIPTION
1	4	289008457	Single Degasser
2	1	615004676	Label
3	4	410003177	Screw w/ Polyp

TOOL #	DESCRIPTION
N/A	T10 Torx Driver

CC

4.2 Install Degassers and a Label to Bracket with (4) Screws.

NOTE: Do not over-tighten the screws as it may distort the Label.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 4.0 **OPERATION DESCRIPTION**
PREP DEGASSER/GPV BRACKET

ITEM	QTY	PART #	DESCRIPTION
1	3	410003534	Barbed Fitting
2	24.5	430002328	Santoprene Tubing

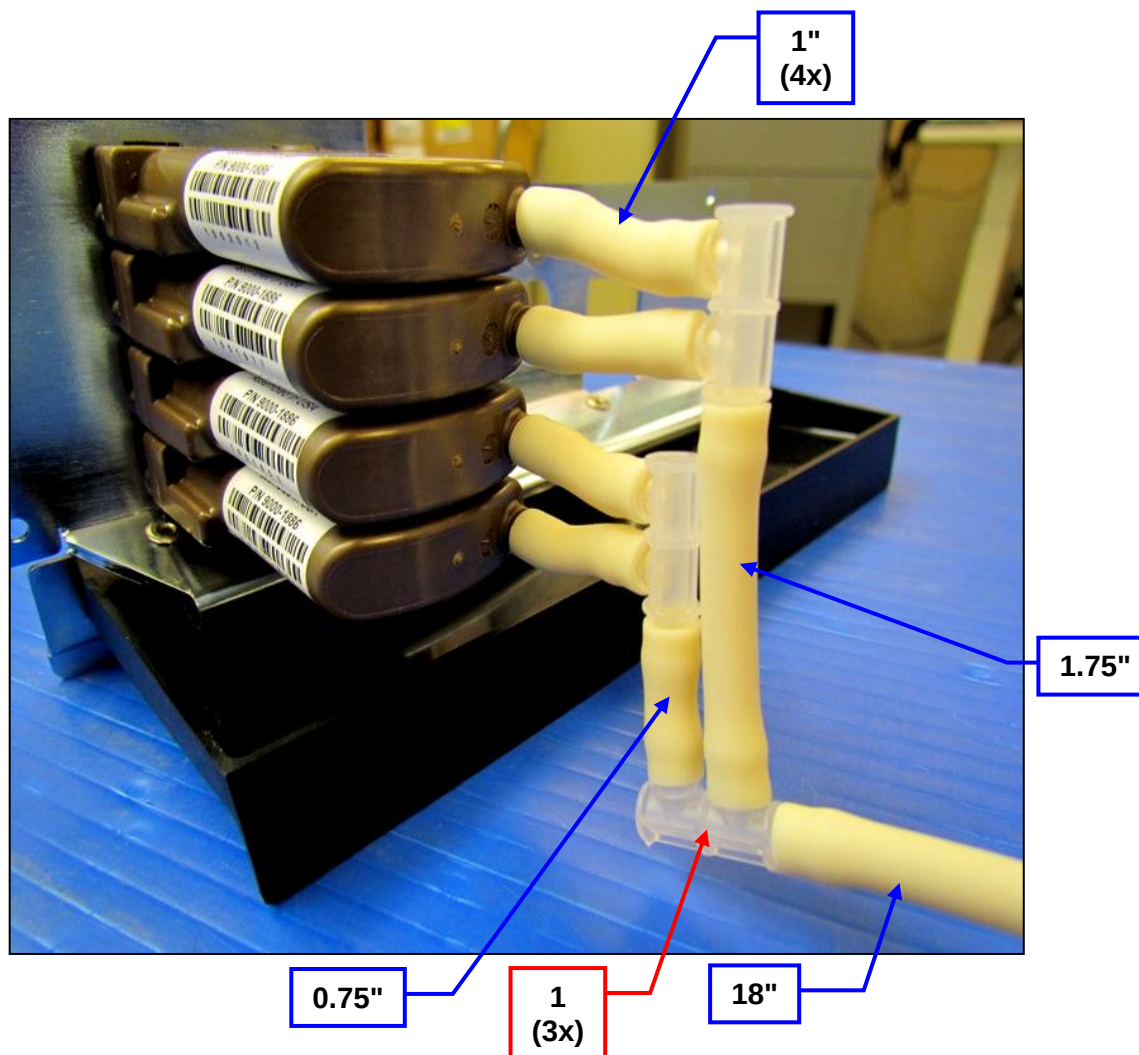
TOOL #	DESCRIPTION
N/A	Razor Blade or Equivalent
N/A	Measuring Tape or Equivalent

4.3 Cut Tubing to the following quantities and lengths:

Qty	Length (inches)
1	0.75 inches
4	1.0 inches
1	1.75 inches
1	18.0 inches

Install the Tubing onto Barbed Fittings and then install to Bracket/ Degasser assembly as shown.

Set assembly aside.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 4.0 **OPERATION DESCRIPTION**
PREP DEGASSER/GPV BRACKET

ITEM	QTY	PART #	DESCRIPTION
1	1	279003338	GPV
2	1	400007197	GPV Bracket
3	4	WAT034347	Screw

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

S

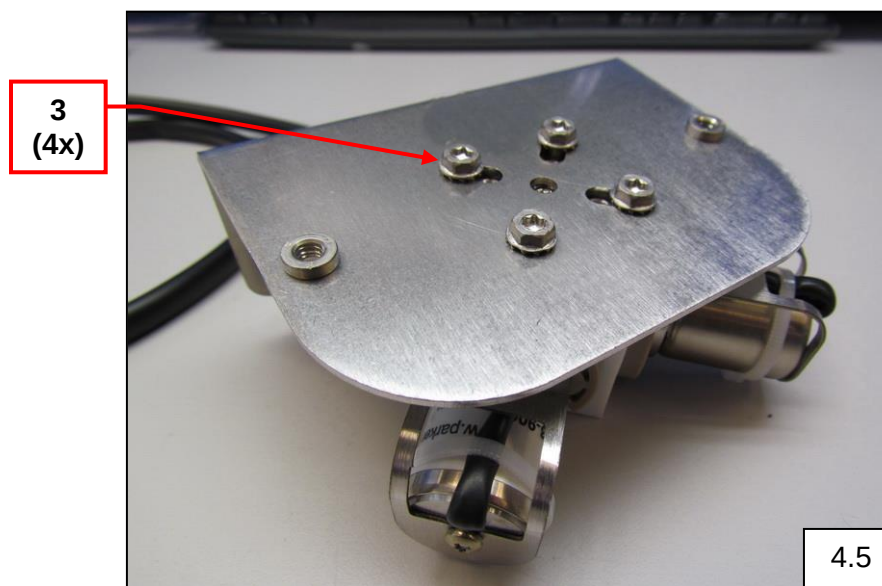
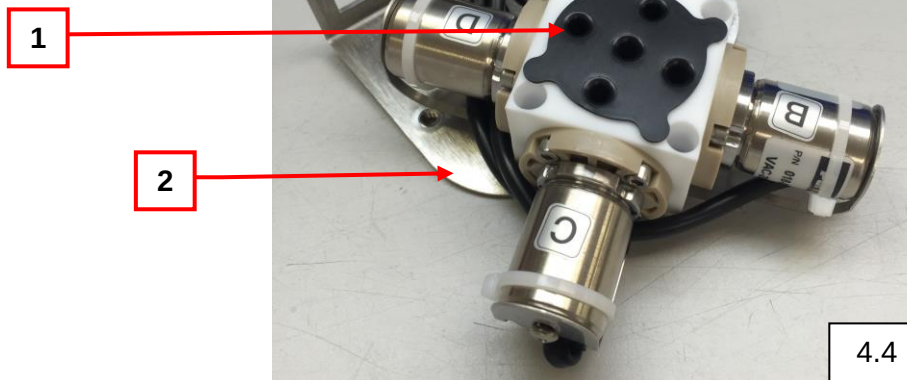
Scan the GPV serial number into SigmaQuest.

4.4 Route GPV Cable Connector through hole in Bracket.

DO NOT remove protective insert(s) from ports

4.5 Secure GPV to Bracket with (4) Screws.

NOTE: ENSURE THAT WIRES DO NOT GET PINCHED BETWEEN BRACKETS WHEN ASSEMBLING.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 4.0 OPERATION DESCRIPTION PREP DEGASSER/GPV BRACKET

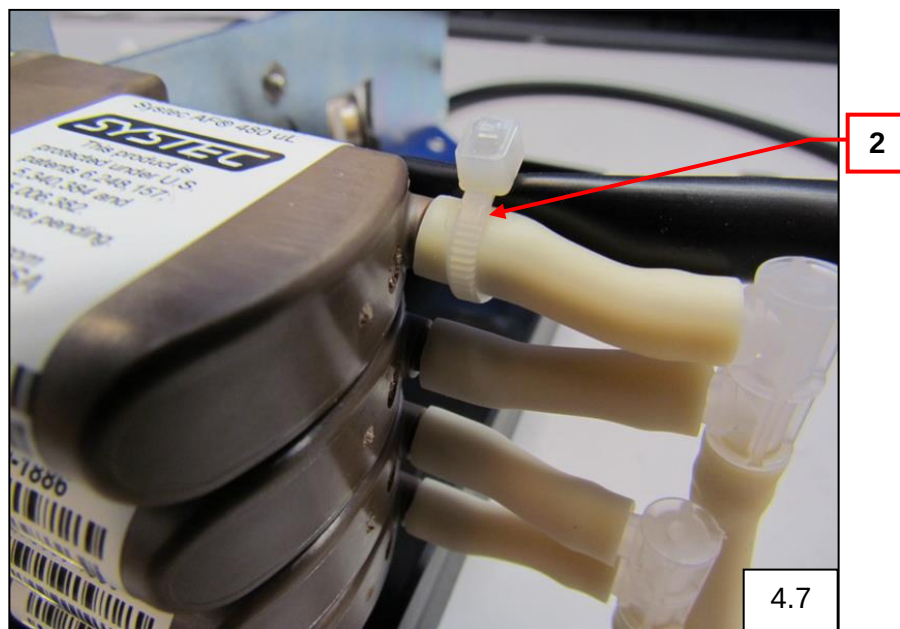
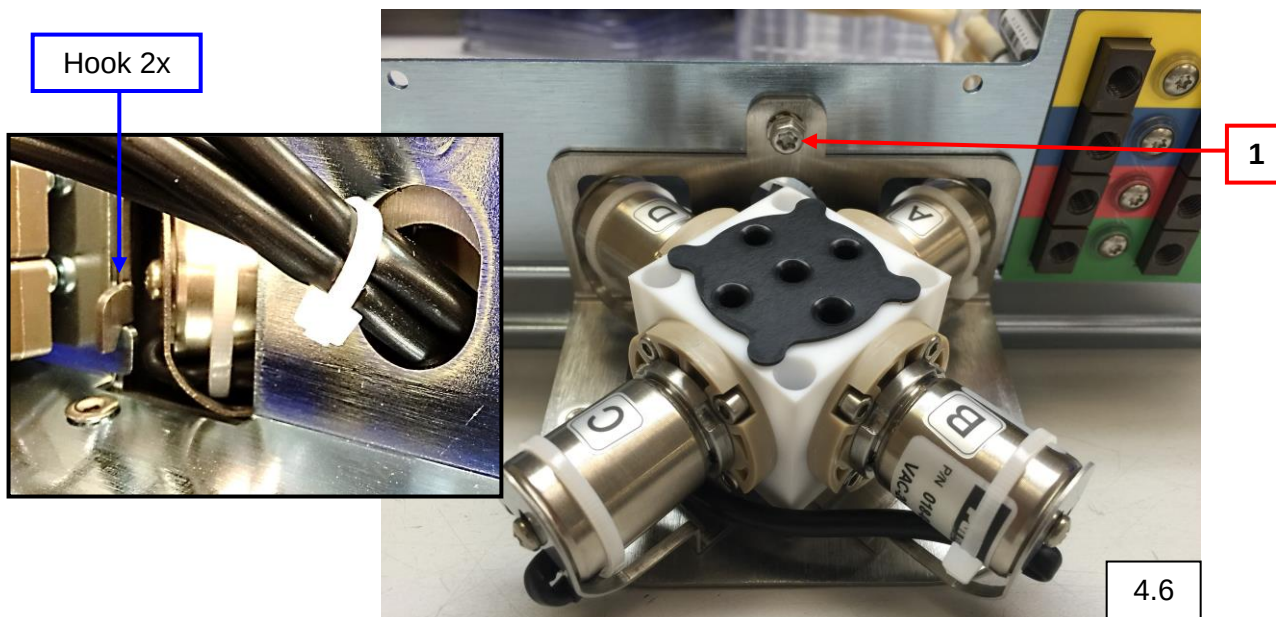
ITEM	QTY	PART #	DESCRIPTION
1	1	WAT034347	Screw
2	1	WAT027033	Cable Tie

TOOL #	DESCRIPTION
N/A	T20 Torx Driver
N/A	Wire Cutters

4.6 Feed GPV cable through Degasser Bracket Assembly (set aside earlier).

Hook GPV Bracket onto Degasser Bracket, and then secure with (1) Screw.

4.7 **Secure GPV Cable to top Degasser Leg with Cable Tie.**



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 26 of 81

OPER 4.0 OPERATION DESCRIPTION
PREP DEGASSER/GPV BRACKET

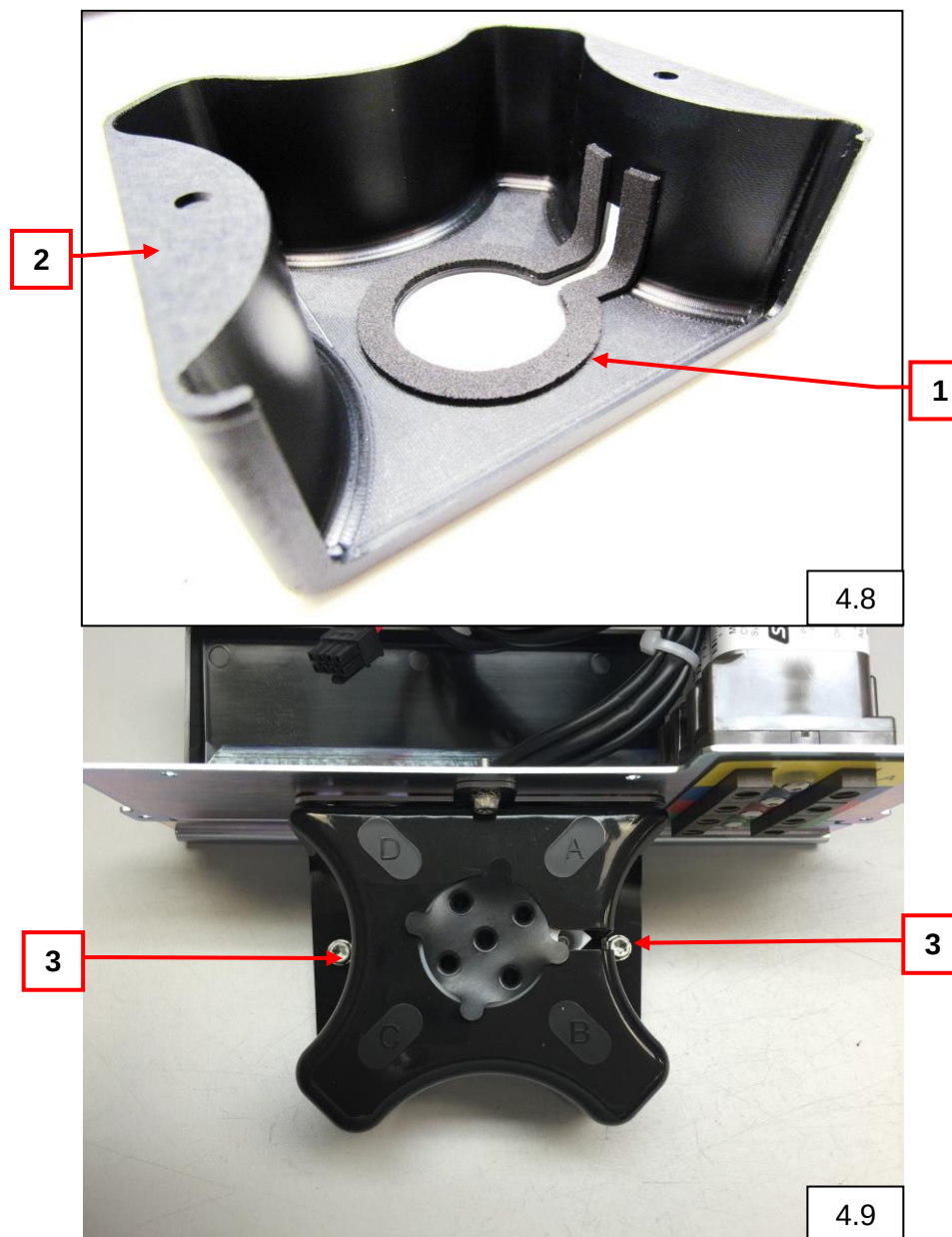
ITEM	QTY	PART #	DESCRIPTION
1	1	425001398	GPV Cover Gasket
2	1	415002851	GPV Cover
3	2	WAT034347	Screw

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

4.8 Adhere Gasket to inside of the Cover around the hole and slot.

4.9 Place Cover over GPV and secure with (2) Screws.

If necessary, remove protective insert from port holes to install GPV cover. Once cover is attached, reinstall protective insert(s).



Verify



Scan



Torque



Critical Clean



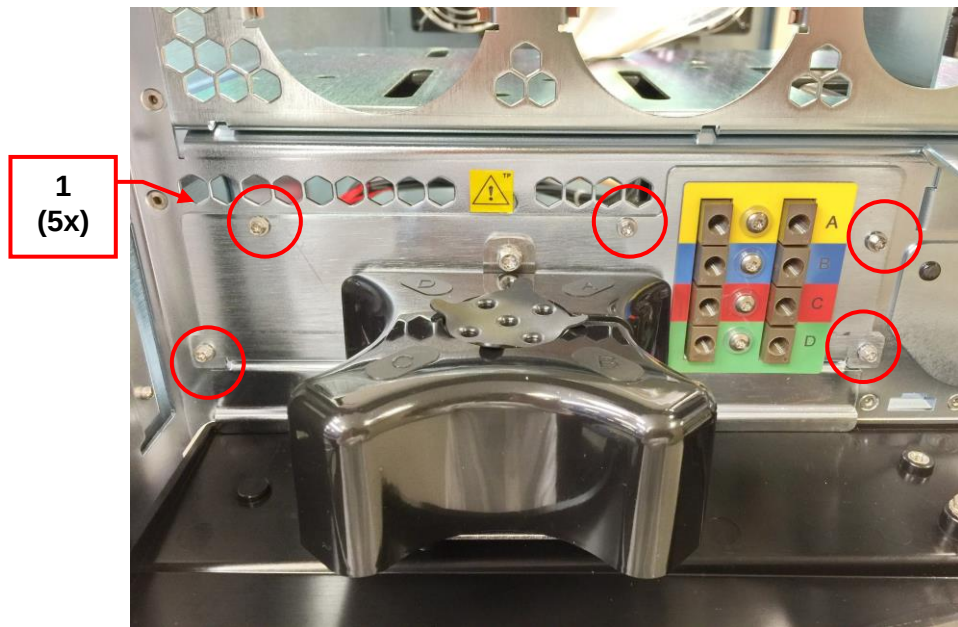
Electrostatic

OPER 5.0 OPERATION DESCRIPTION
INSTALL GPV/DEGASSER BRACKET

ITEM	QTY	PART #	DESCRIPTION
1	5	410000272	M3 SEMS Screws

TOOL #	DESCRIPTION
N/A	T10 Torx Driver

- 5.1 Carefully feed GPV Cable and Tubing into and through the middle of the Chassis, and then secure the Degasser assembly to the Chassis using (5) Screws.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER **OPERATION DESCRIPTION**
6.0 RIGHT SIDE CHASSIS PREP

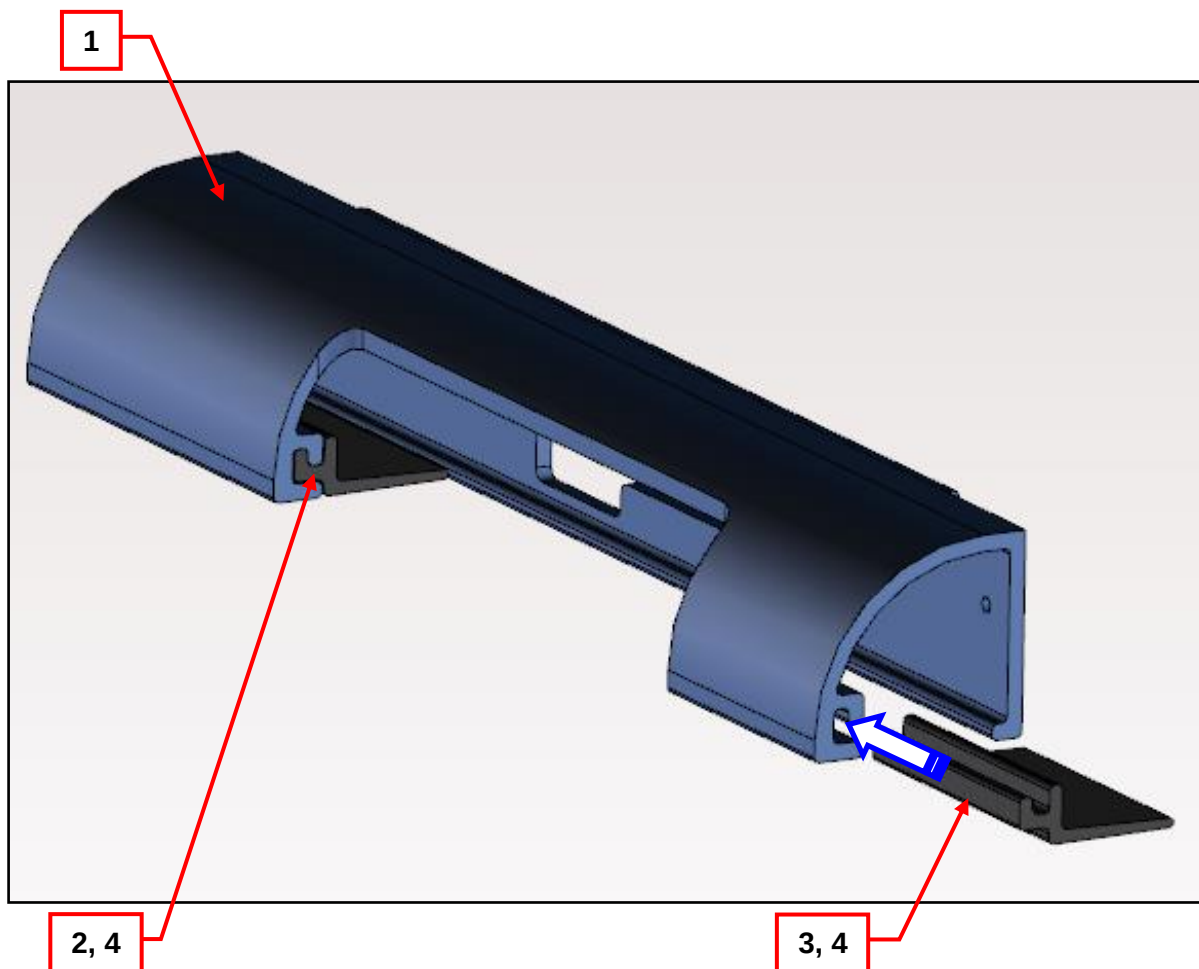
ITEM	QTY	PART #	DESCRIPTION
1	1	405014825	Guide Tube
2	1	415002154	Bottom Guide Cover
3	1	415002153	Top Guide Cover
4	A/R	WAT024078	Clear RTV

TOOL #	DESCRIPTION
N/A	WAT010337 Syringe (or equivalent)

6.1 Pre-fit the Covers into the Tube Guide. If it is tight, wipe the Tube Guide with IPA to make the fit easier.

Apply some RTV into the channels of the Covers, then install the Covers into the Tube Guide. The RTV is meant to keep the Covers from sliding out of the Tube Guide.

NOTE: This subassembly can be assembled prior to start of the unit build or at any time during the build procedure.



Verify



Scan



Torque



Critical Clean



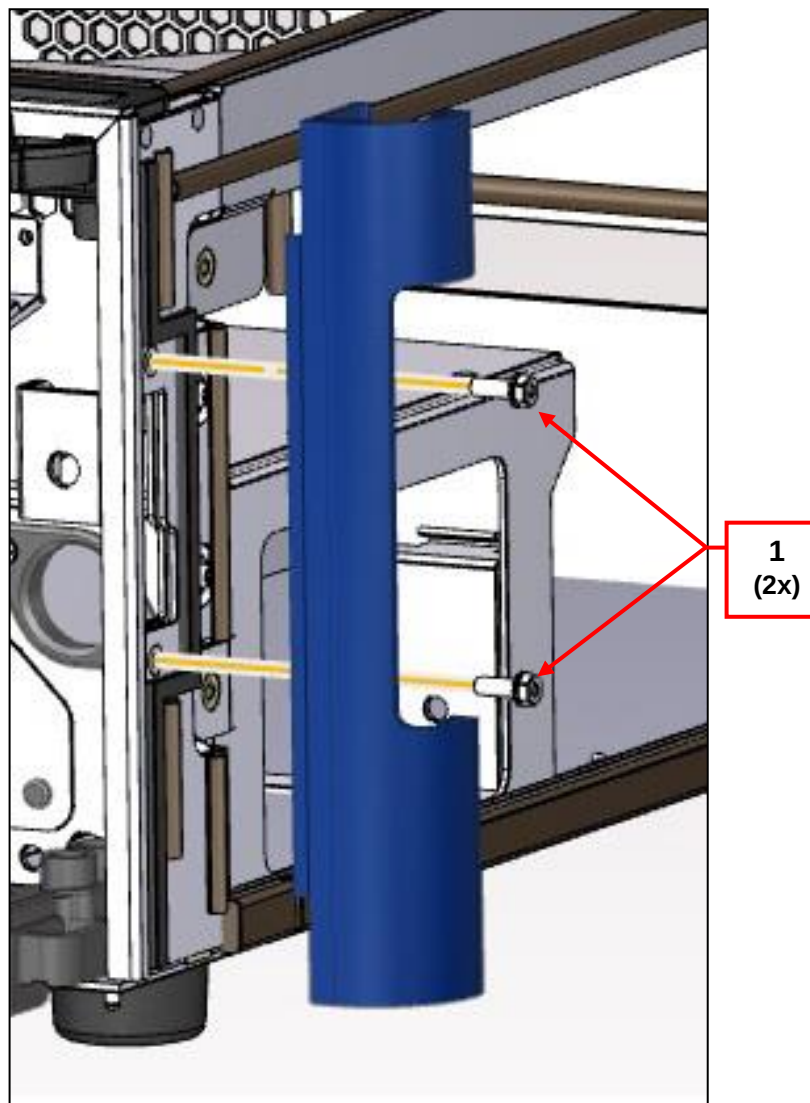
Electrostatic

OPER OPERATION DESCRIPTION
6.0 RIGHT SIDE CHASSIS PREP

ITEM	QTY	PART #	DESCRIPTION
1	2	WAT034346	M4 SEMS Screw

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

6.2 Install the Tube Guide onto the Chassis with
 (2) Screws.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 6.0 OPERATION DESCRIPTION
RIGHT SIDE CHASSIS PREP

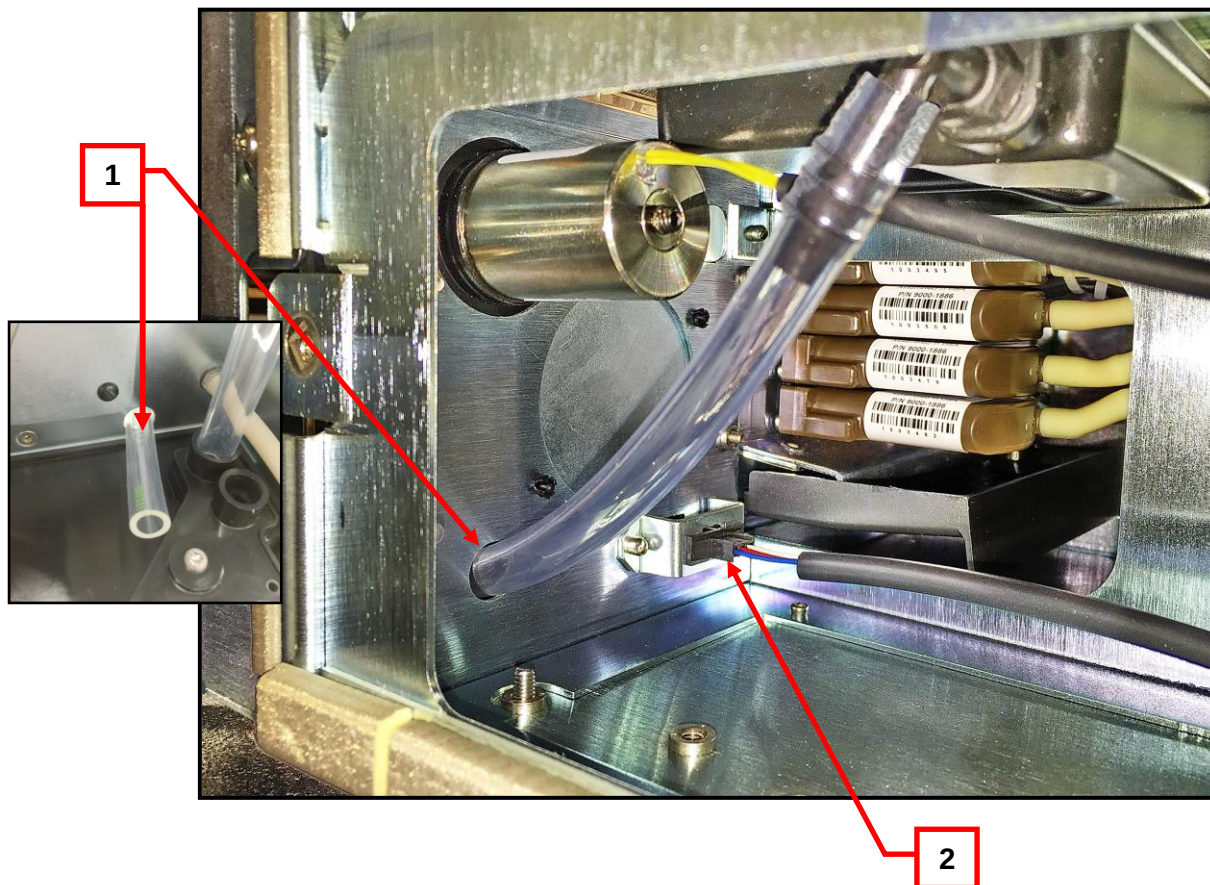
ITEM	QTY	PART #	DESCRIPTION
1	6.5"	430000604	Tygon Tubing
2	1	441000862	Leak Detect Cable

TOOL #	DESCRIPTION
N/A	Razor Blade or Equivalent
N/A	Measuring Tape or Equivalent

6.3 Cut Tygon Tubing to 6.5 inches. Orient the Tube onto the Drip Tray Fitting, and feed through the front bulkhead.

NOTE: Tubing can be cut prior to start of unit build, or at any time during the build procedure.

Orient and install the Leak Detect Cable. The connector must be fully seated into the bracket.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 7.0 OPERATION DESCRIPTION
PREP THE REAR BULKHEAD

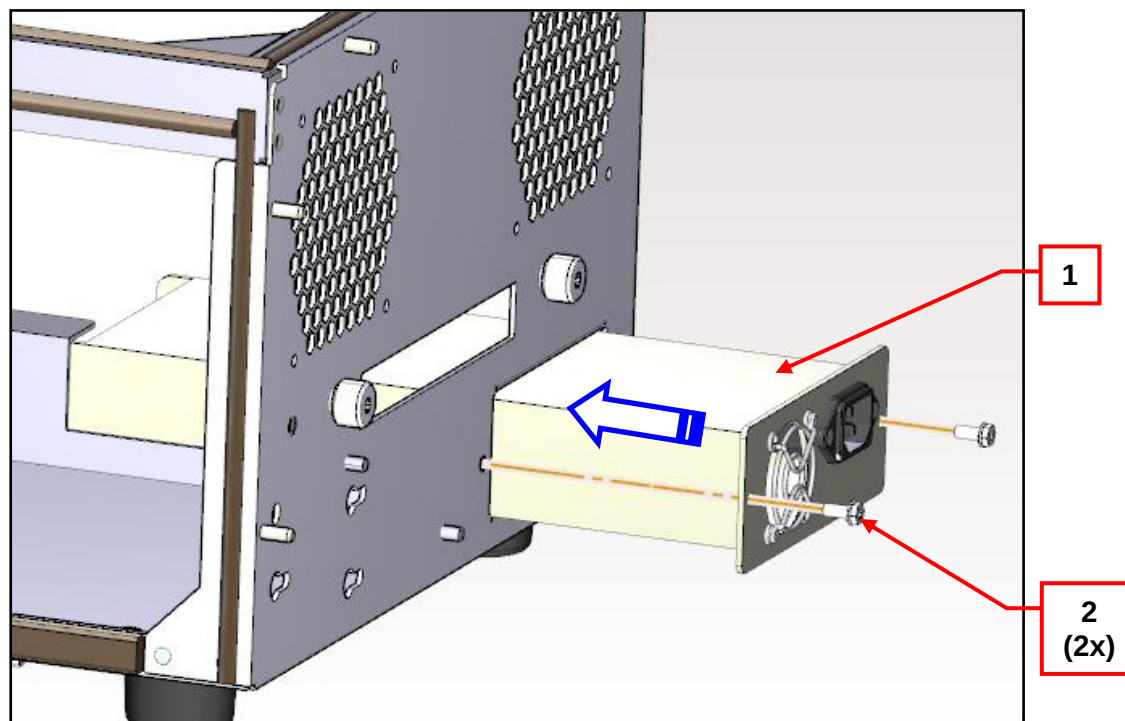
ITEM	QTY	PART #	DESCRIPTION
1	1	279002268	Power Supply
2	2	410000419	M4 Screws

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

S

Scan the Power Supply serial number into SigmaQuest.

7.1 Orient and slide the Power Supply through the rear bulkhead of the Chassis. Secure with (2) Screws.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 7.0 OPERATION DESCRIPTION PREP THE REAR BULKHEAD

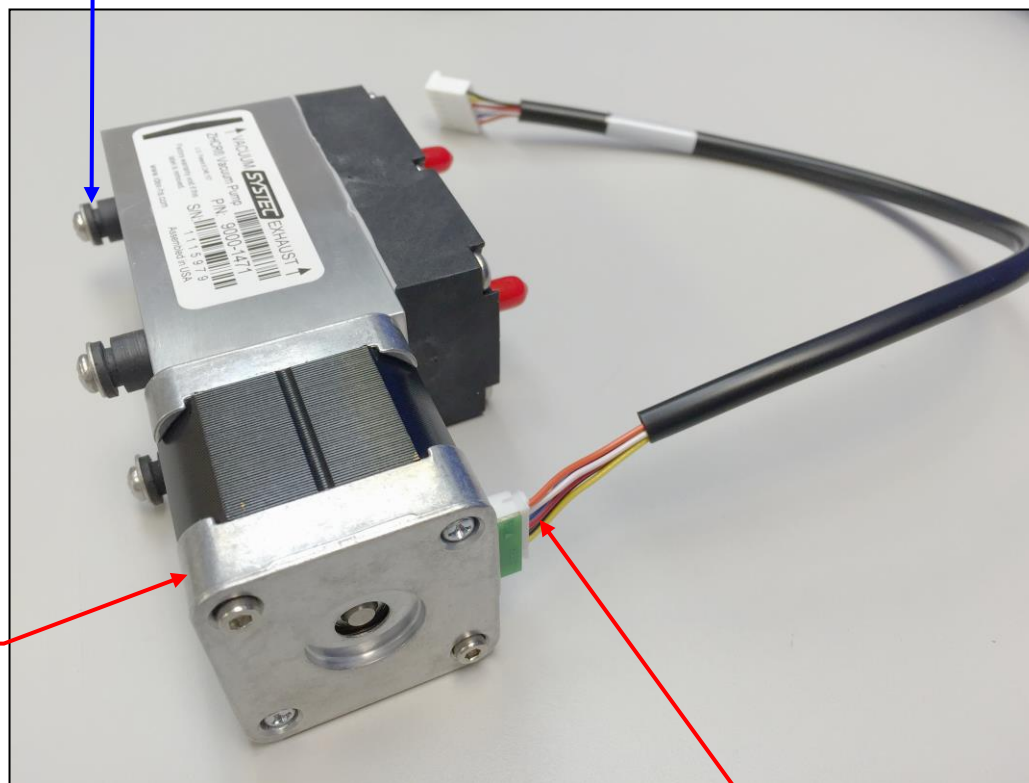
ITEM	QTY	PART #	DESCRIPTION
1	1	279001056	Degasser Pump
2	1	441000975	Degasser Motor Cable

TOOL #	DESCRIPTION
N/A	Phillips #2 Driver

7.2 Loosely install the components that come with the Degasser.

Discard the Cable that comes with the degasser and install the new Cable.

NOTE: This subassembly can be assembled prior to start of the unit build or at any time during the build procedure.



Verify



Scan



Torque



Critical Clean



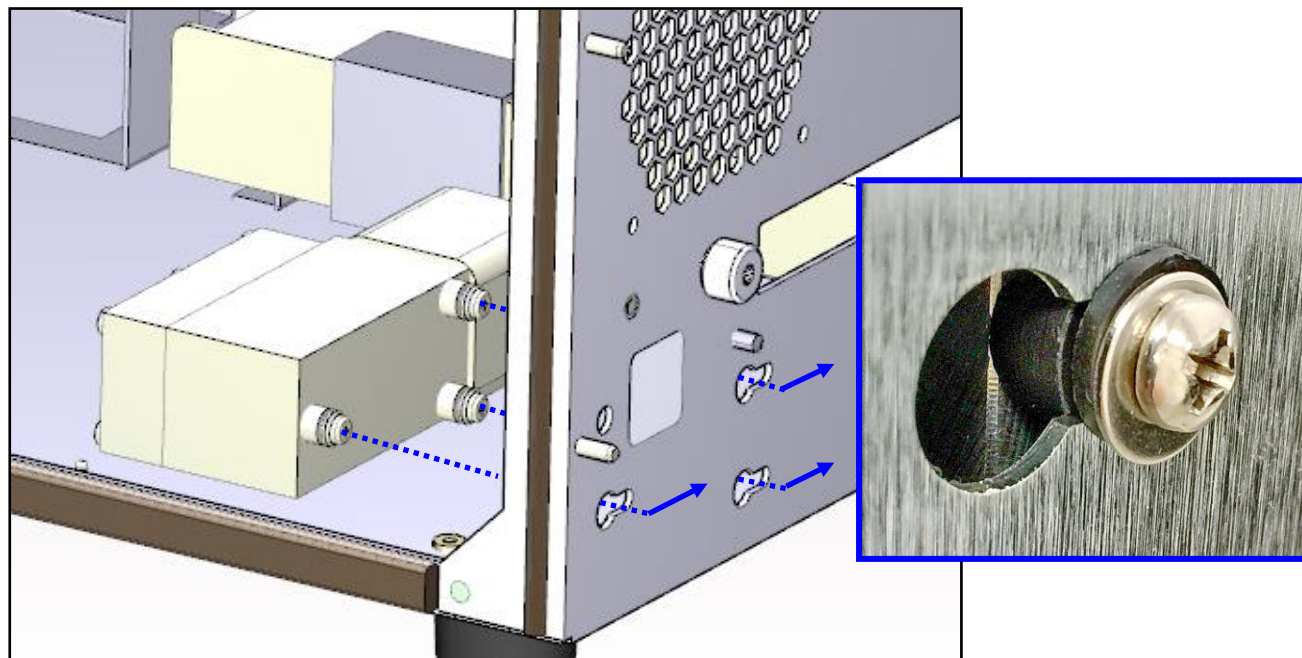
Electrostatic

OPER OPERATION DESCRIPTION
7.0 PREP THE REAR BULKHEAD

TOOL #	DESCRIPTION
N/A	Phillips #2 Driver

7.3 Orient and place the Degasser into the Chassis. Secure the three screws.

Note: Bring screws flush to mount, then 2 full revolutions.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 7.0 OPERATION DESCRIPTION
PREP THE REAR BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	2	279001809	Fan assembly
2	8	WAT025249	Snap Rivet
3	2	WAT270830	Fan Guard

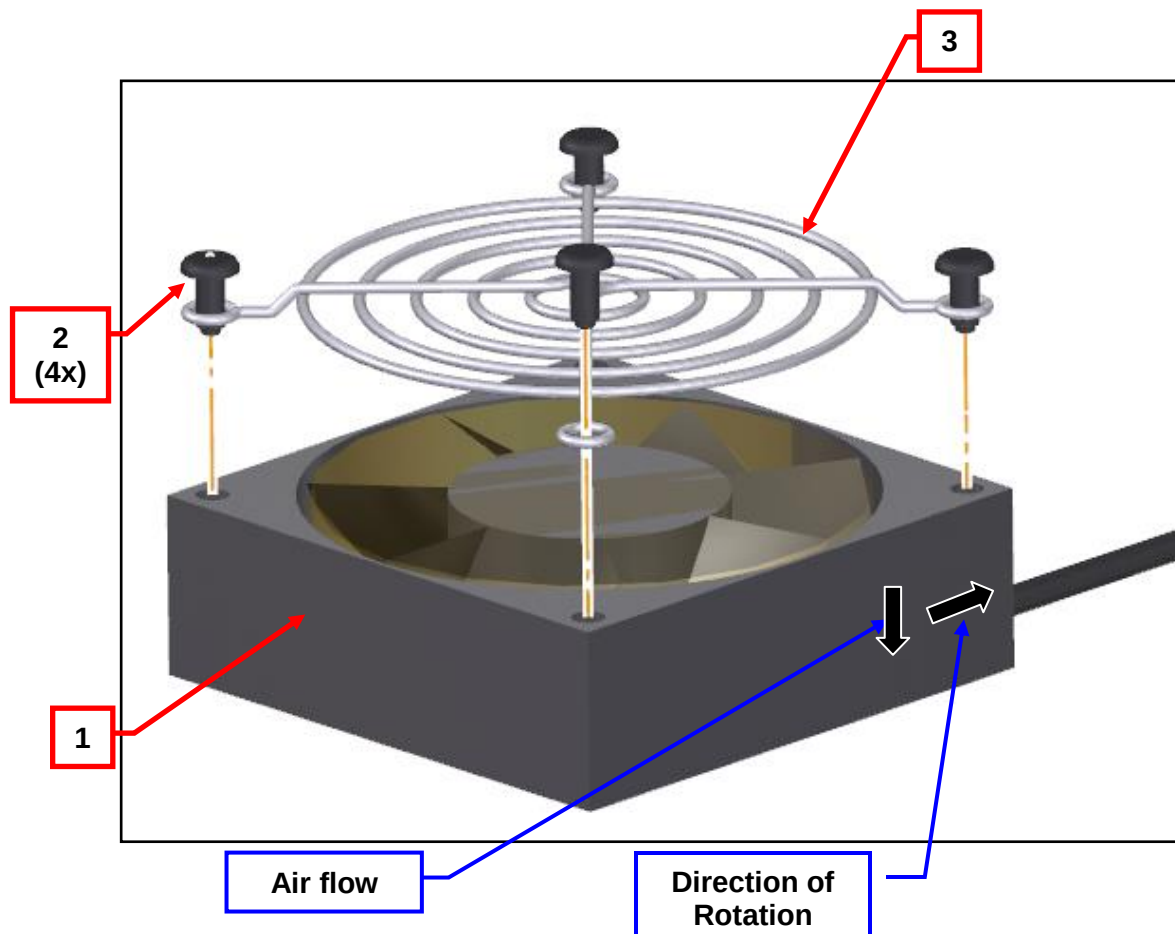
7.4 Identify the direction of air flow marked on the Fan housing.

Orient the Fan Guard and the Fan as shown, and secure with four Snap Rivets.

NOTE: The orientation of the Fan Guard to the Fan is not important.

Repeat for second Fan.

NOTE: This subassembly can be assembled prior to start of the unit build or at any time during the build procedure.

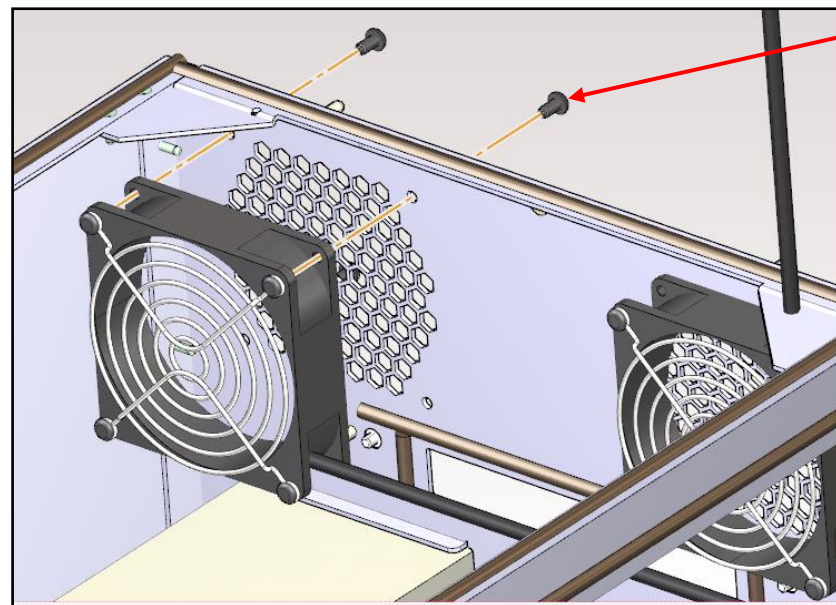


OPER **OPERATION DESCRIPTION**
7.0 PREP THE REAR BULKHEAD

ITEM	QTY	PART #	DESCRIPTION
1	8	WAT025249	Snap Rivets

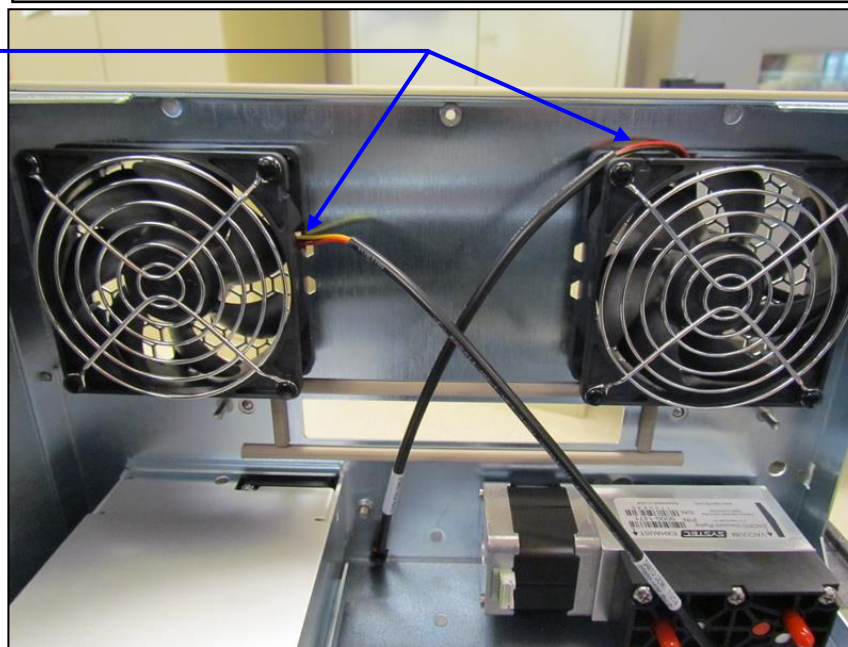
7.5 Orient the first Fan Assembly with the Cable positioned to the right, and install to the rear bulkhead with (4) Snap Rivets as shown.

7.6 Repeat the above with the second Fan Assembly, but position the Cable to the top.



1
(8x)

Note location
of Cables



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 8.0 OPERATION DESCRIPTION INTERNAL CHASSIS PREP

ITEM	QTY	PART #	DESCRIPTION
1	24"	430002328	Santoprene Tubing
2	1	WAT036231	Barbed Tee

TOOL #	DESCRIPTION
N/A	Razor Blade or Equivalent
N/A	Measuring Tape or Equivalent

8.1 Cut Tubing to the following quantities and lengths:

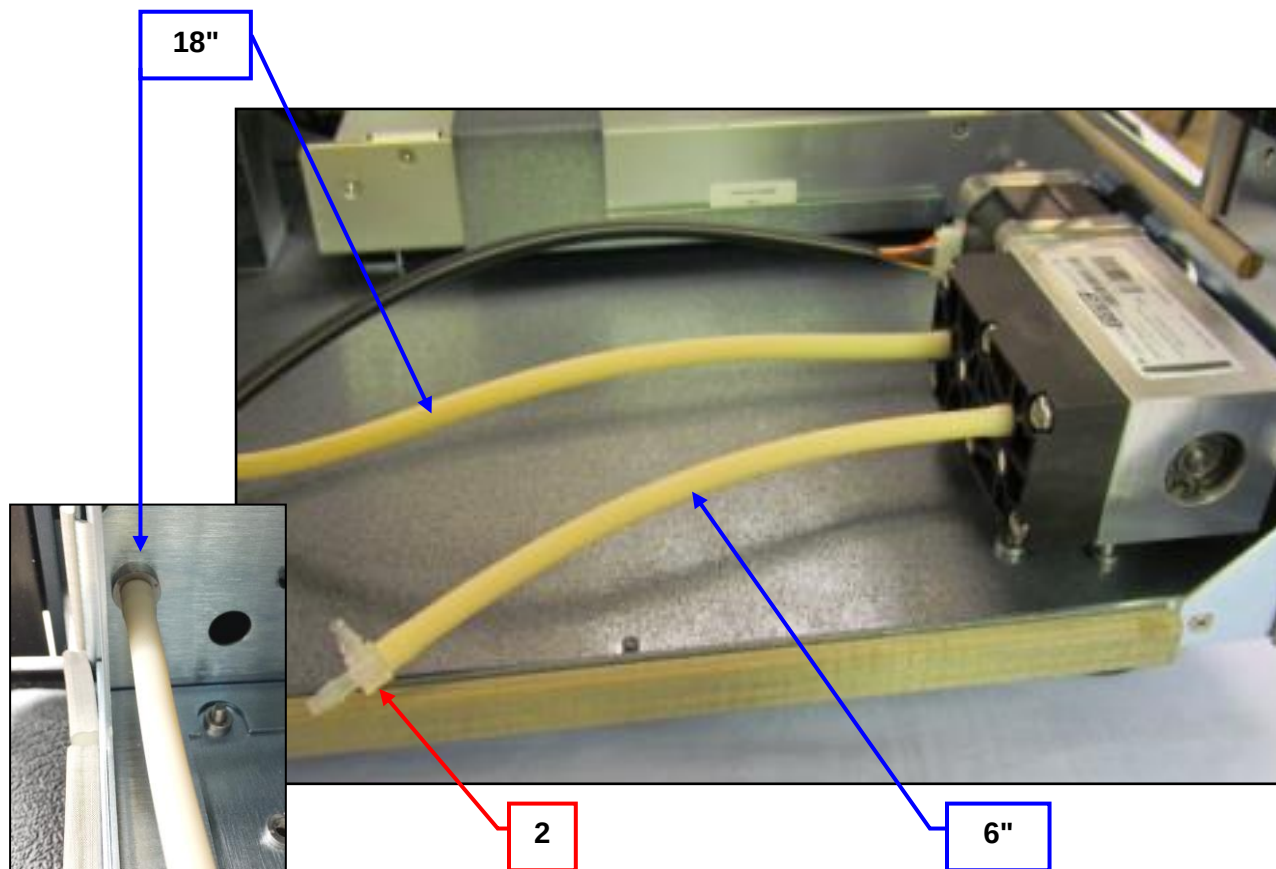
Qty	Length (inches)
1	6 inches
1	18 inches

NOTE: Tubing can be cut prior to start of the unit build, or at any time during the build procedure.

Install the two pieces of Tubing to the Degasser Pump as shown.

Attach the 18" Tubing to the Barb at the front of the Chassis.

Install the Barbed Tee to the end of the 6" Tube.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 8.0 OPERATION DESCRIPTION INTERNAL CHASSIS PREP

ITEM	QTY	PART #	DESCRIPTION
1	1	WAT027033	Cable Tie
2	1	410006204	Snap-in Cable Clip

TOOL #	DESCRIPTION
N/A	Cutters

8.2 Connect the Tubing from the Degasser Bracket (front of Chassis) onto the Barbed Fitting from the Degasser Pump (rear of Chassis).

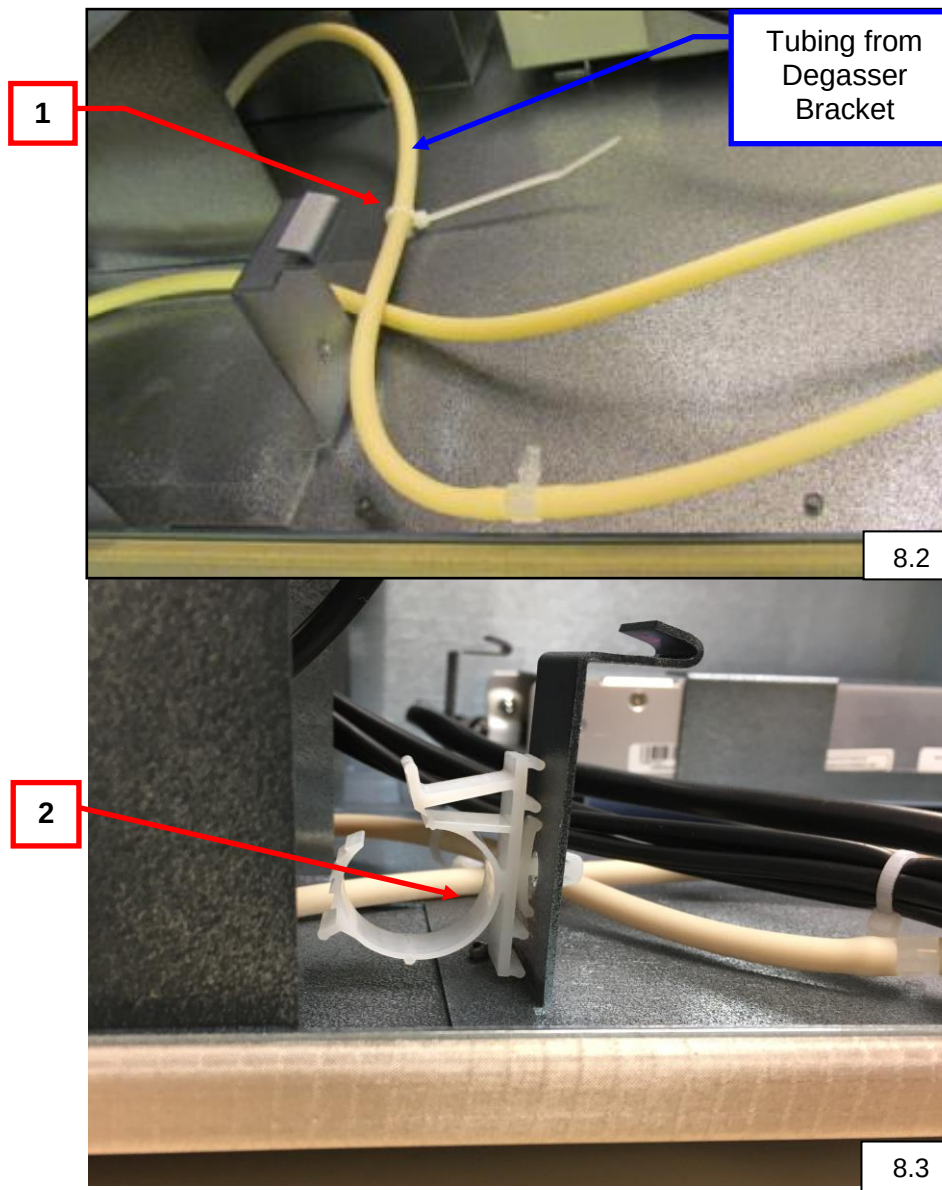
Route Tubing as pictured, leaving the excess neatly placed in the front of the Chassis.

Use a Cable Tie to secure the Tubing to the Push-In Holder in the Chassis floor.

DO NOT CONSTRICT TUBING.

Cut the excess tie.

8.3 Orient the Snap-in Cable Clip with the open end up, and install to the Chassis.



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 38 of 81

OPER 9.0 **OPERATION DESCRIPTION**
PCB BRACKET PREP AND INSTALL

NOTE: This PCB Bracket subassembly can be assembled prior to start of the unit build or at any time during the build procedure.

ITEM	QTY	PART #	DESCRIPTION
1	1	210000345	Personality PCB
2	3	410001195	Standoffs

TOOL #	DESCRIPTION
N/A	7MM Nut Driver (optional)

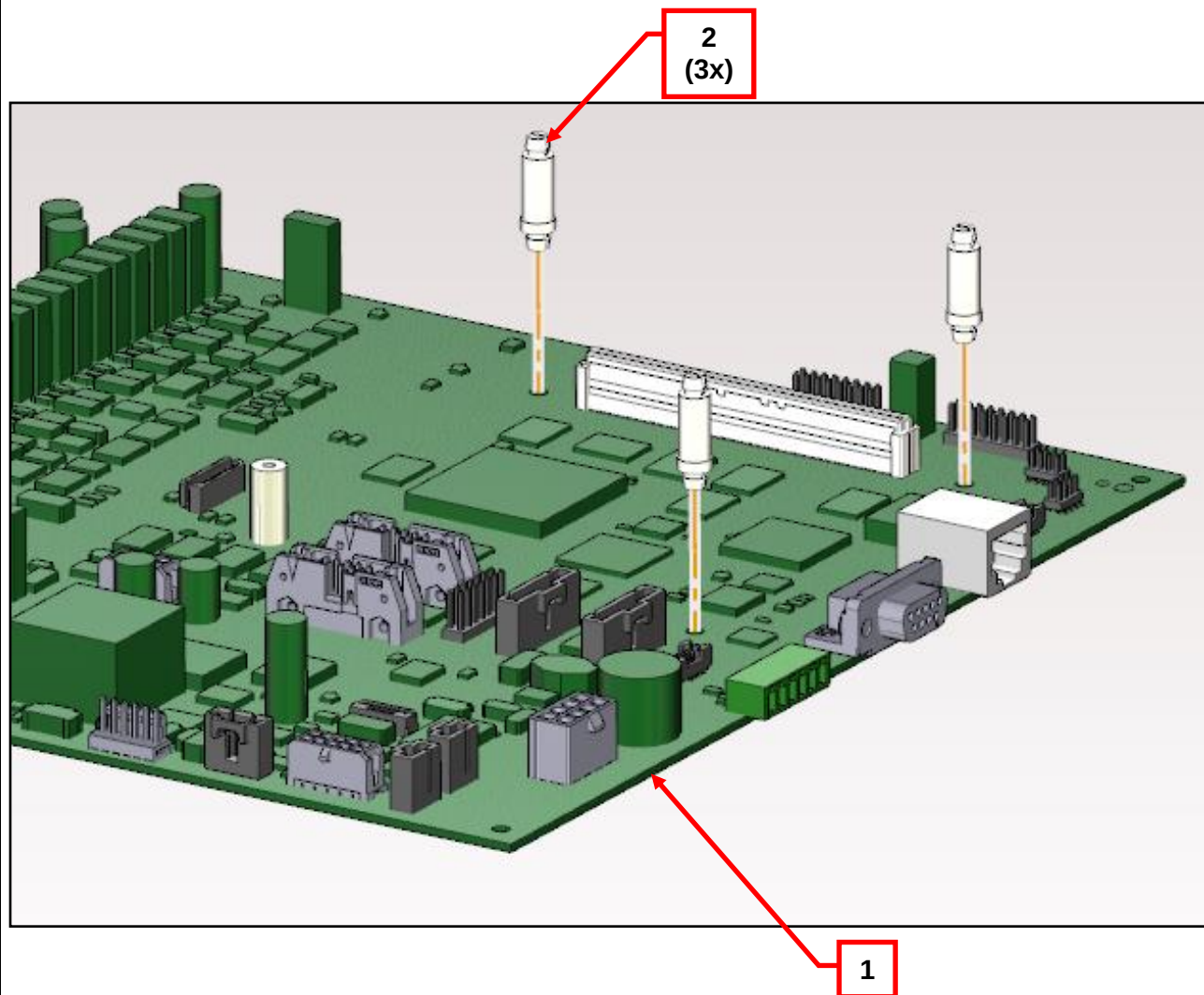


Use ESD precautions when handling PCBs.



Scan the PCB serial number into SigmaQuest.

9.1 Install the three Standoffs into the Personality PCB.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 9.0 **OPERATION DESCRIPTION**
PCB BRACKET PREP AND INSTALL

ITEM	QTY	PART #	DESCRIPTION
1	1	210000520	CPU Board
2	1	WAT046597	Screw, 6-32 Phillip
3	1	WAT050938	Washer, Star

TOOL #	DESCRIPTION
N/A	Phillips #2 Driver
N/A	7mm Nut Driver (optional)

ESD

Use ESD precautions when handling PCBs.

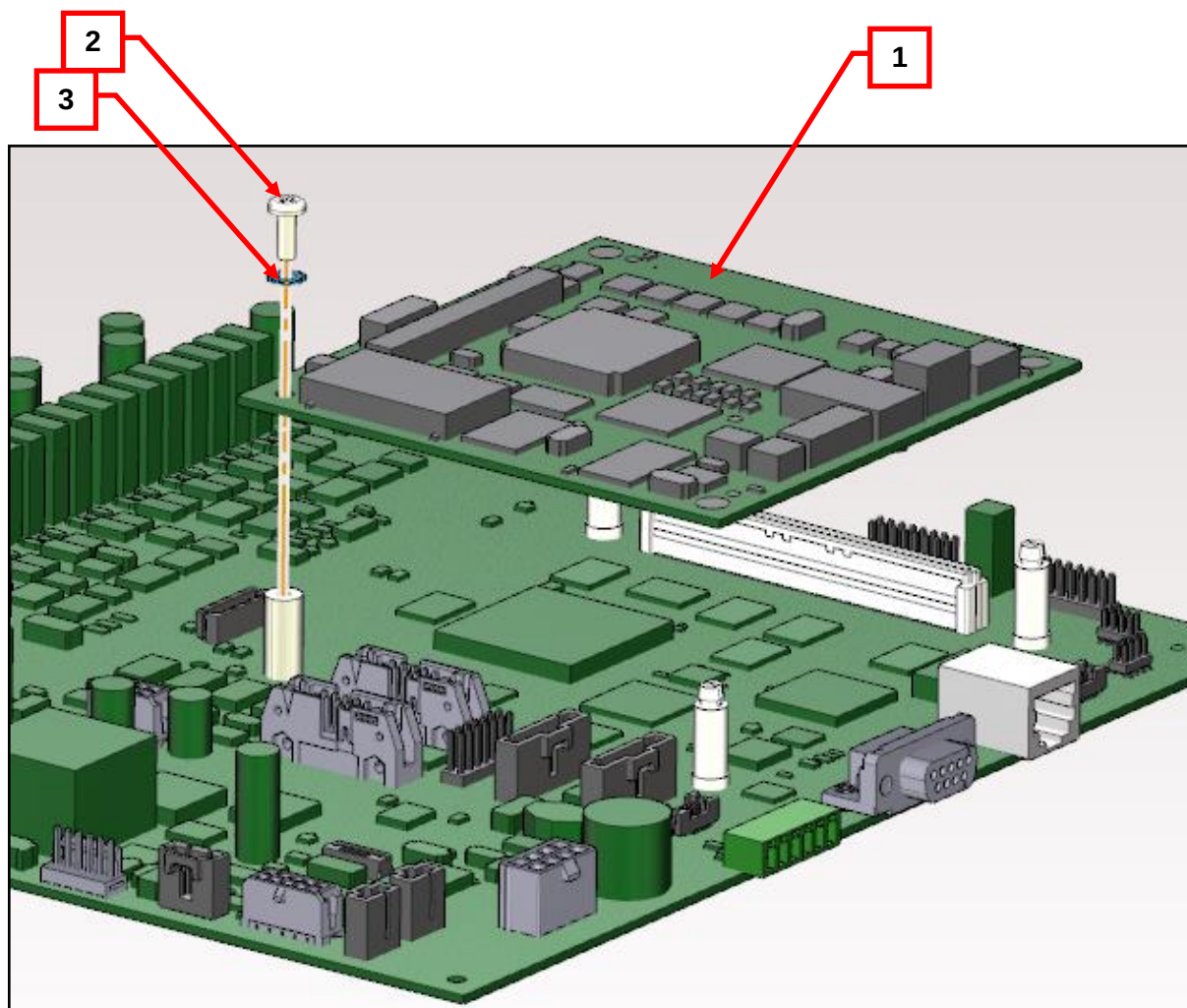
S

Scan the CPU PCB serial number into SigmaQuest.

9.2 Install the CPU PCB onto the Personality PCB.

NOTE: THE CPU MUST BE FULLY SEATED ONTO THE THREE PLASTIC STANDOFFS AND INTO THE LONG CONNECTOR

Secure the CPU with a Lock Washer and a Screw in the corner shown



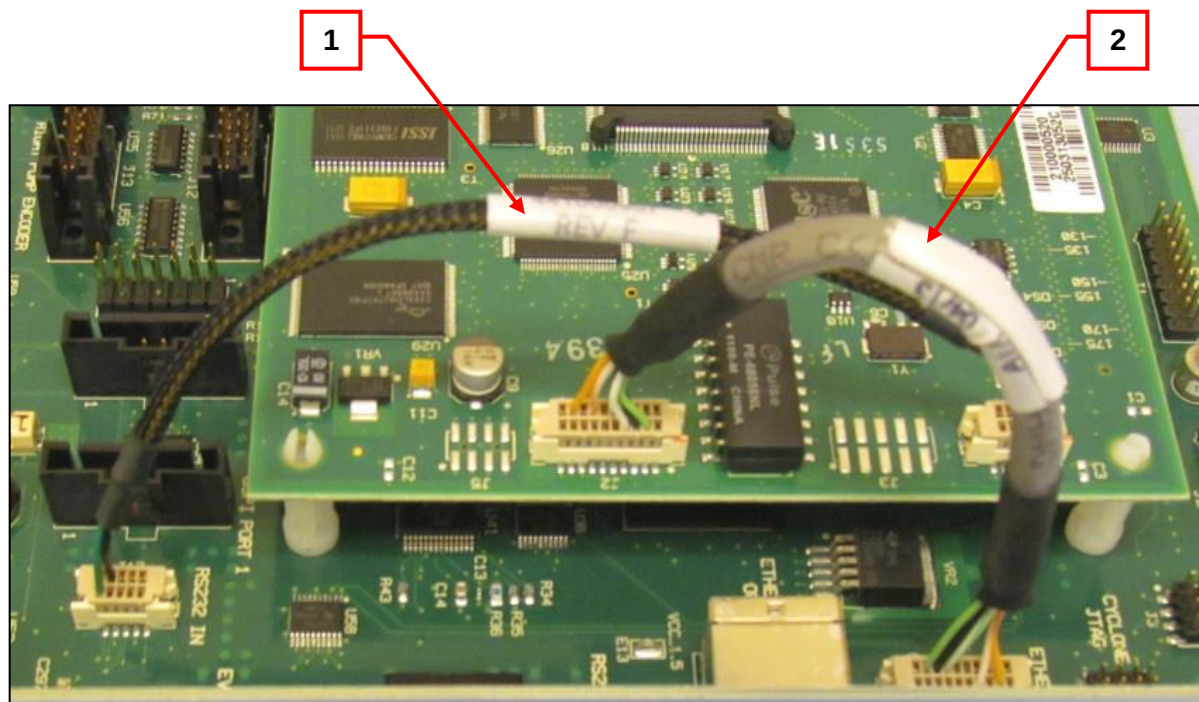
OPER OPERATION DESCRIPTION
9.0 PCB BRACKET PREP AND INSTALL

ITEM	QTY	PART #	DESCRIPTION
1	1	441000957	RS232 Cable
2	1	441000968	Ethernet Cable



Use ESD precautions when handling PCBs.

9.3 Install the RS232 Cable and the Ethernet Cable between the CPU and Personality PCBs.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION
9.0 PCB BRACKET PREP AND INSTALL

ITEM	QTY	PART #	DESCRIPTION
1	1	400006183	PCB Bracket
2	2	410003061	Edge Holding Standoffs
3	3	410006198	Flat Top Standoff

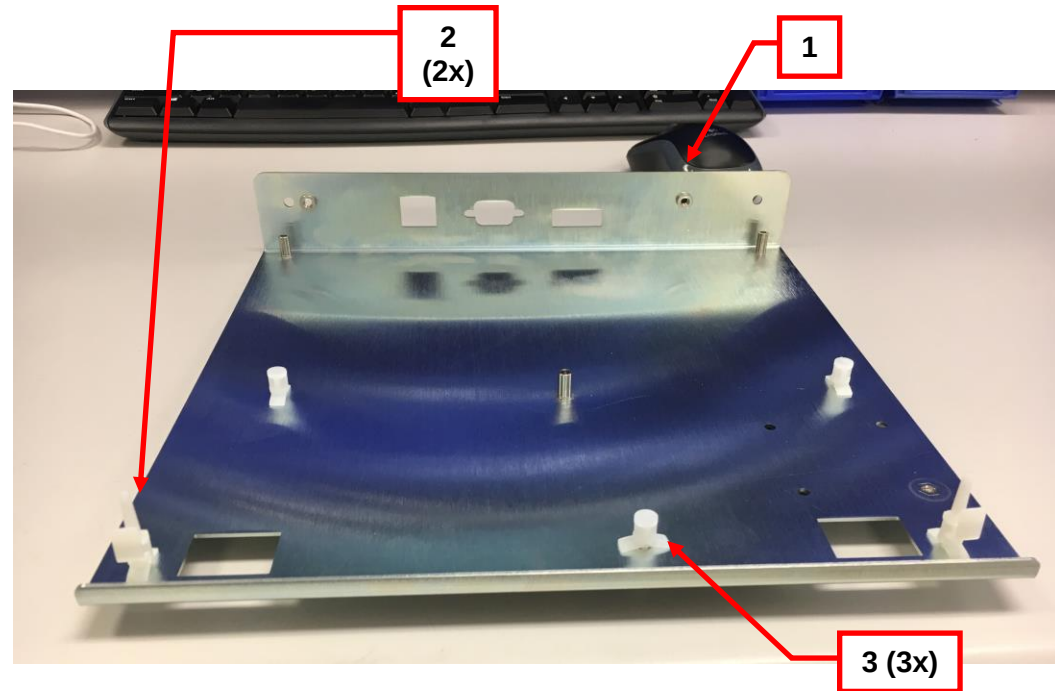
TOOL #	DESCRIPTION
N/A	7mm Nut Driver (optional to aid in Standoff installation)

NOTE: The PCB Bracket is a component of the Chassis Assembly 289010629.

9.4 Hold/place the PCB Bracket (set aside earlier) to allow clearance on the underside where Edge Holding Standoffs will be installed.

Snap Edge Holding Standoffs into the top side of the Bracket.

9.5 Snap Flat Top Standoffs into Bracket



Verify



Scan



Torque



Critical Clean



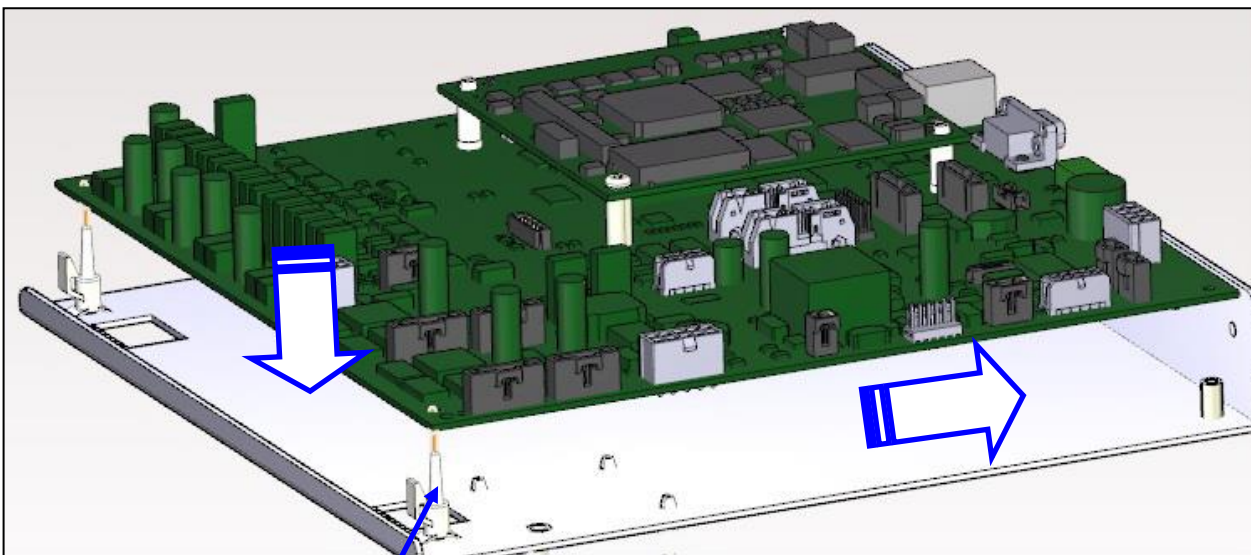
Electrostatic

OPER 9.0 OPERATION DESCRIPTION PCB BRACKET PREP AND INSTALL

ESD

Use ESD precautions when handling PCBs.

- 9.6 Feed the PCB connectors towards and into access holes on back of Bracket, and then snap the PCB onto the Standoffs. **For ease of installment, pull the latch back on the Standoff when locking PCB in place.**



"lock-in"
Standoffs
(2X)



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER **OPERATION DESCRIPTION**
9.0 **PCB BRACKET PREP AND INSTALL**

ITEM	QTY	PART #	DESCRIPTION
1	2	WAT089113	Screwlock
2	3	410000272	M3 SEMS Screw

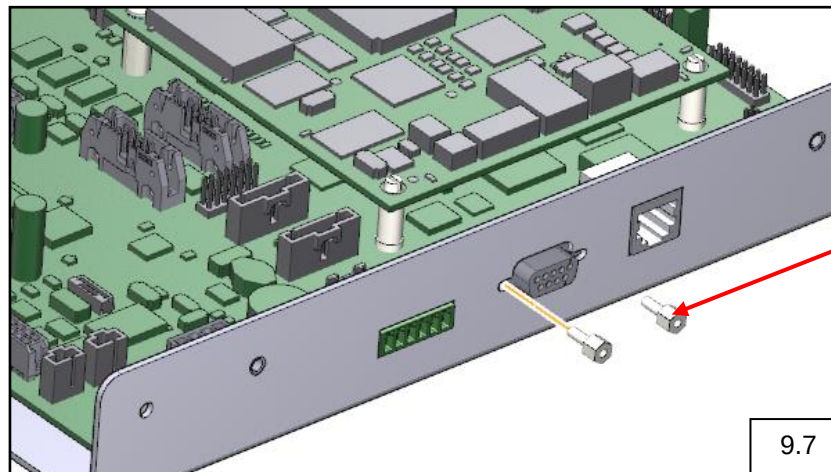
TOOL #	DESCRIPTION
N/A	T10 Torx Driver
N/A	5.5 MM Nut Driver

ESD

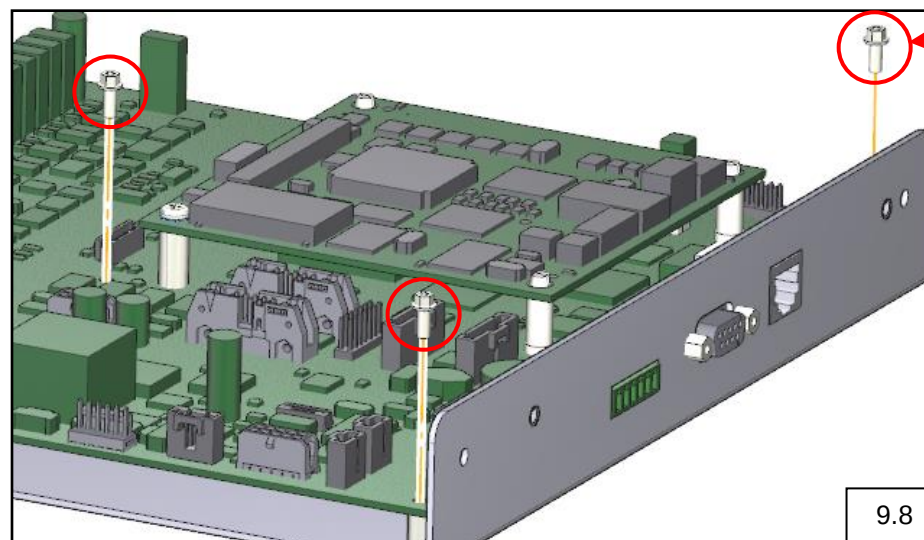
Use ESD precautions when handling PCBs.

9.7 Secure the Board to the Bracket with (2) Standoffs on the rear flange.

9.8 Secure the Board to the Bracket with (3) Screws on the main plate.



1
(2x)



2
(3x)



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 9.0 OPERATION DESCRIPTION
PCB BRACKET PREP AND INSTALL

ITEM	QTY	PART #	DESCRIPTION
1	3	410001170	PCB Standoffs
2	1	210000396	Degasser PCB
3	1	410000272	M3 SEMS Screw
4	1	410003124	Flow Restrictor

TOOL #	DESCRIPTION
N/A	T10 Torx Driver



Use ESD precautions when handling PCBs.



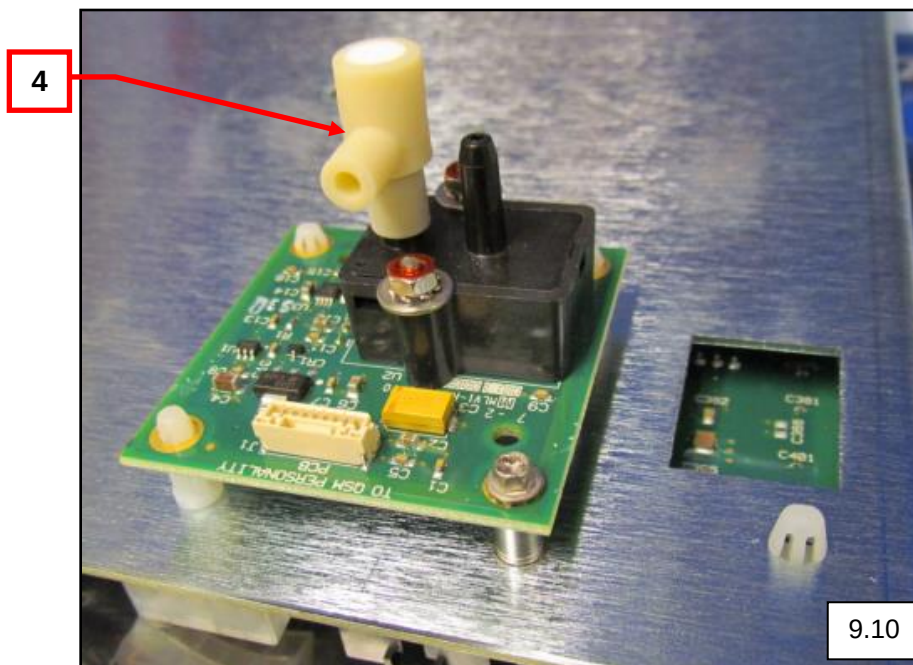
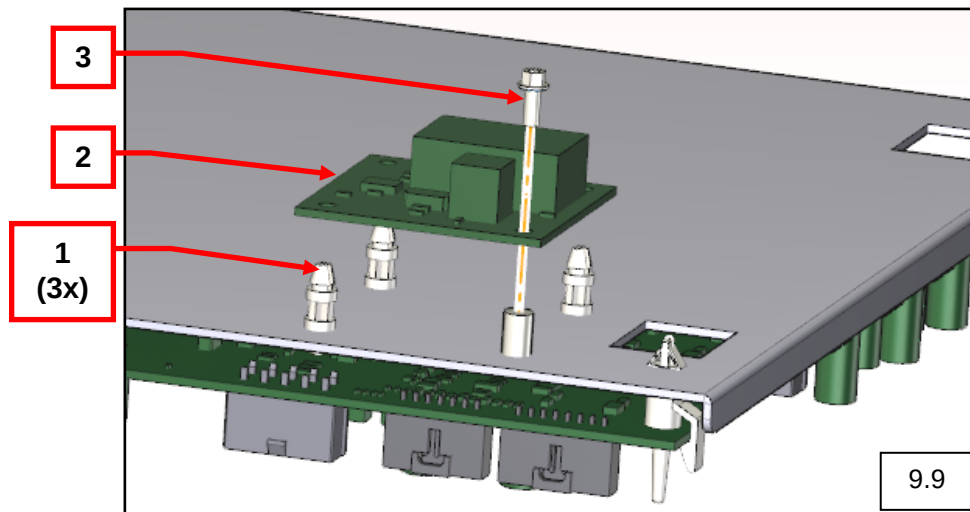
Scan the Degasser PCB serial number into SigmaQuest.

Note: When performing the following steps, be sure not to put pressure on or damage the CPU and Personality PCB components.

9.9 Install the three Standoffs into the bottom side of the PCB Bracket.

Orient and secure the Degasser PCB to the Bracket with Screw.

9.10 Orient and install the Flow Restrictor to the **left side barb**, as pictured, on the Degasser PCB. **Do not bottom out the Flow Restrictor to the barb as this can block the air flow.**



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION
9.0 PCB BRACKET PREP AND INSTALL

ESD

Use ESD precautions when handling PCBs.

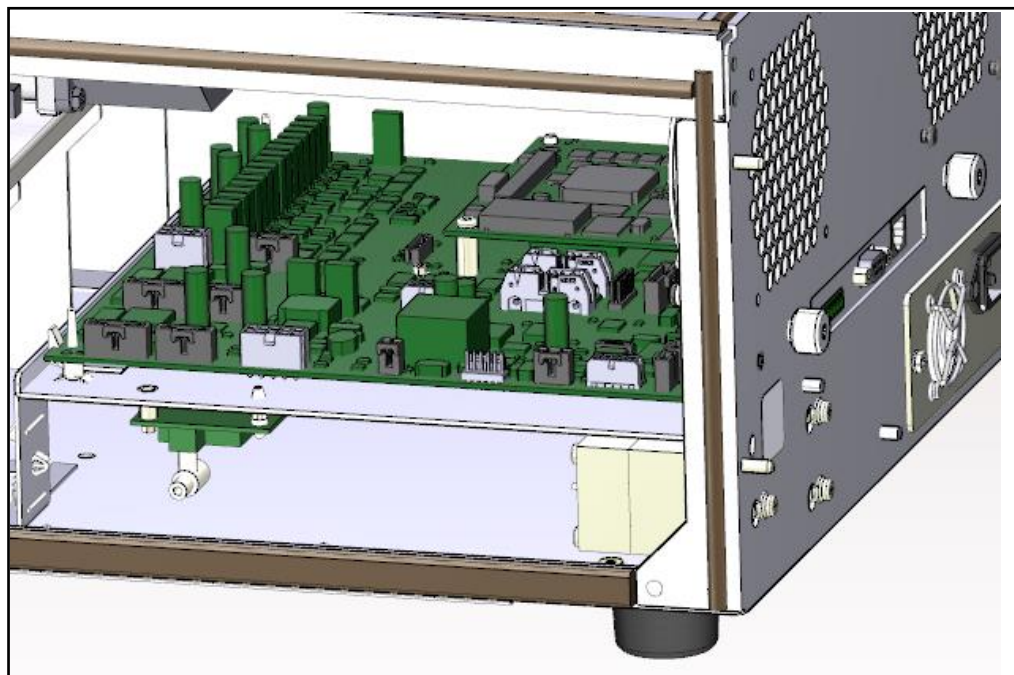
9.11 Install the PCB/ Bracket into the Chassis.

Engage the front corners of the PCB Bracket to the catches on the Chassis bracket, while also aligning PCB Bracket onto the pins at rear of Chassis.

Tighten the captive screws.



Bracket
Catch



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 46 of 81

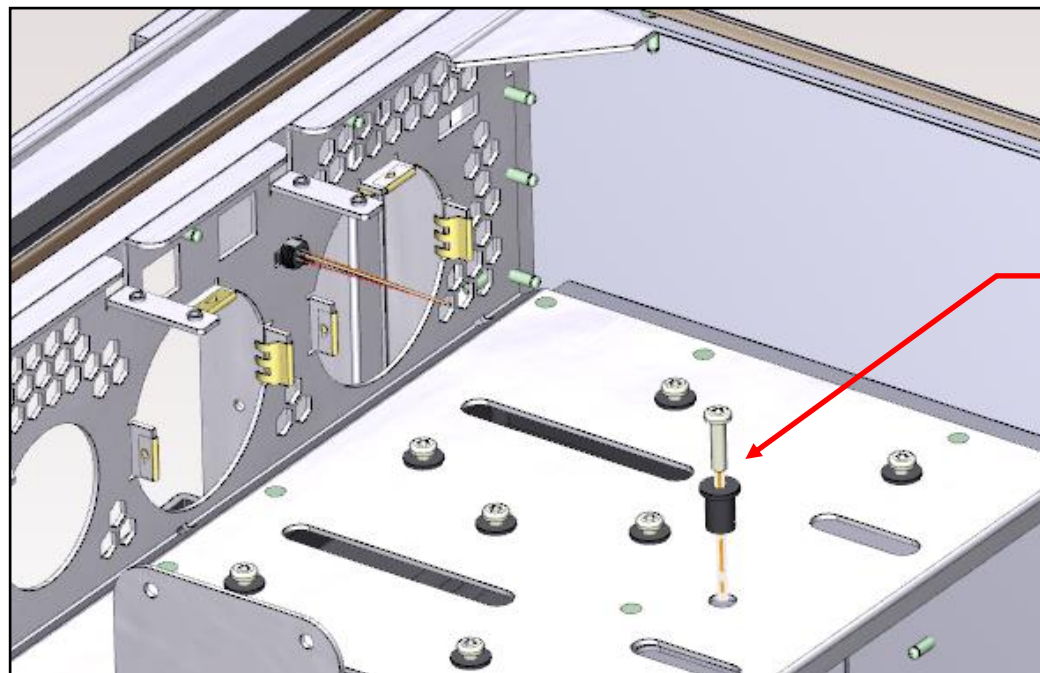
OPER 10.0 OPERATION DESCRIPTION ACTUATOR/DRIVE INSTALL

ITEM	QTY	PART #	DESCRIPTION
1	8	WAT078856	Well-nuts
2	8	WAT411416	M4 Screws

10.1 Assemble Screws to Well Nuts until bottom of screw is approximately flush with bottom of grommet.

NOTE: This Screw and Grommet can be assembled prior to start of the unit build or at any time during the build procedure.

Place the Well nuts and Screws into each of the (8) holes in the Chassis.



1, 2
(8x)



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER **OPERATION DESCRIPTION**
10.0 ACTUATOR/DRIVE INSTALL

ITEM	QTY	PART #	DESCRIPTION
1	2	279003388	Actuator

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

10.2 Angle the Actuator and feed **through the far side window of the Chassis**. Locate onto the Well-nuts/Screws.

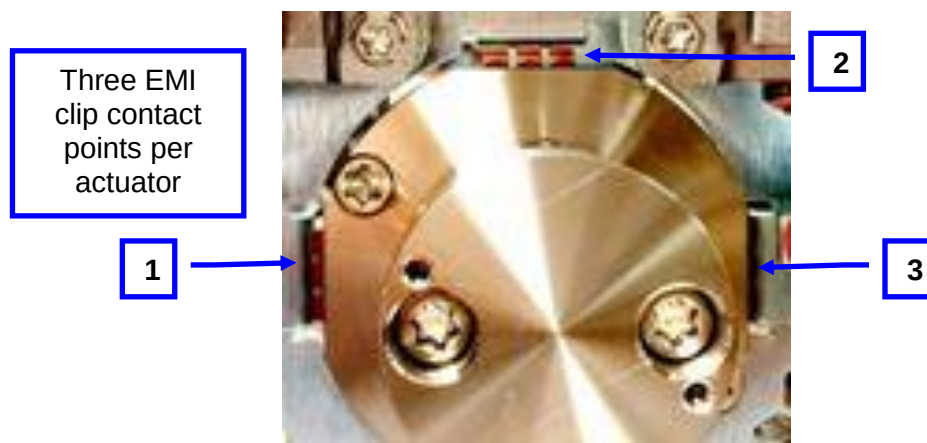
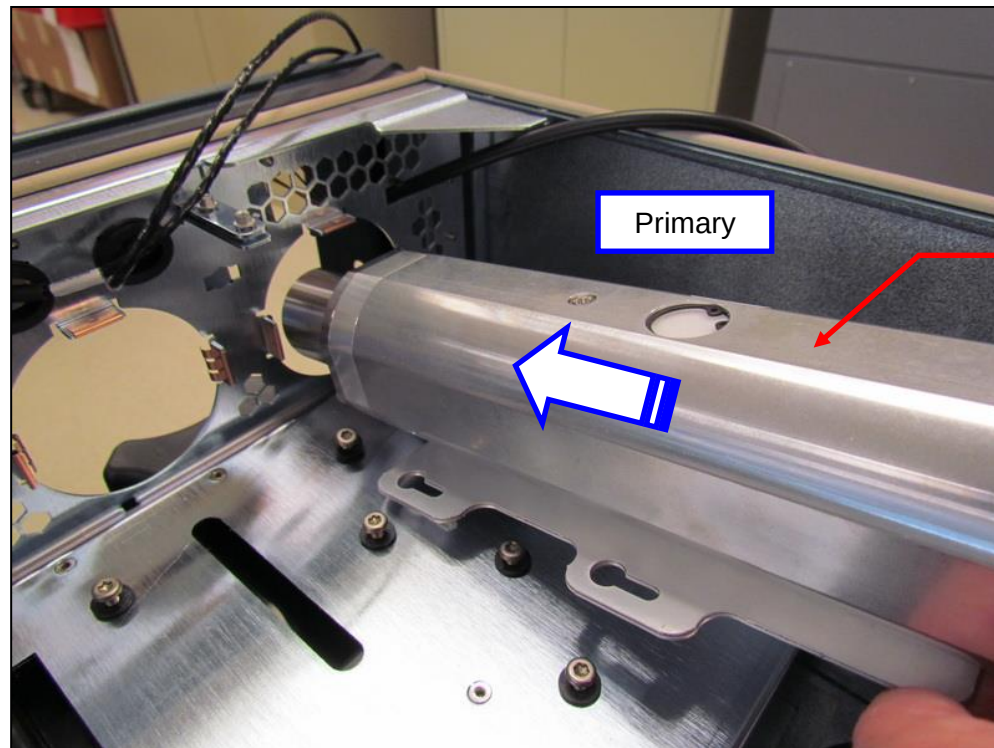
Slide the Actuator all the way forward and secure the Screws. This is the **Primary Actuator**.

Repeat the above steps for the second Actuator. This is the **Accumulator Actuator**.

Note: Ensure 3 chassis EMI clips make contact with each actuator after installation.

S

Scan the Actuator serial numbers into SigmaQuest.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 10.0 **OPERATION DESCRIPTION**
ACTUATOR/DRIVE INSTALL

ITEM	QTY	PART #	DESCRIPTION
1	1	279001852	Drive Assembly
2	1	289010197	Cartridge, Dual Mixer
3	1	410001365	M2.5 Screw

TOOL #	DESCRIPTION
N/A	Torque Driver with 5/64" hex insert



Use Critical Clean precautions.



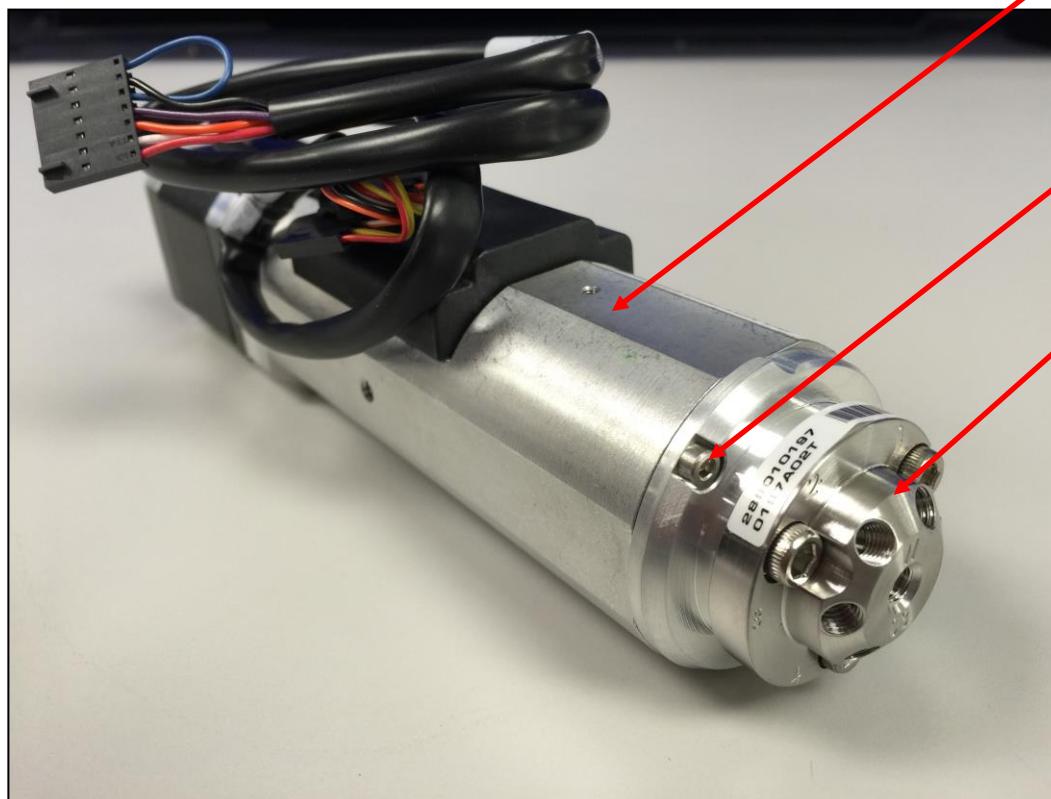
Scan/Enter the Vent Cartridge serial number into SigmaQuest.

10.3 Orient and install the Cartridge Assembly into the Drive Assembly. Secure with Screw.



Torque Screw to 9 in-lbs.

NOTE: This subassembly can be assembled prior to start of the unit build or at any time during the build procedure.



Verify



Scan



Torque



Critical Clean



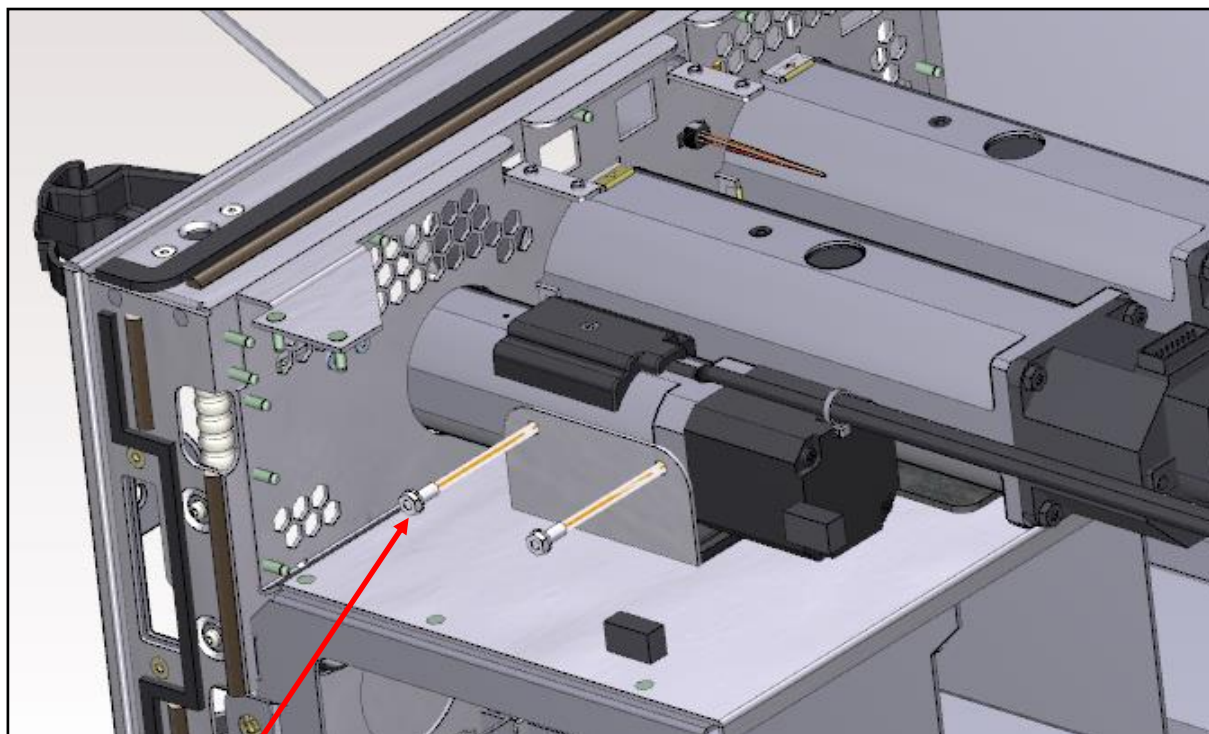
Electrostatic

OPER **OPERATION DESCRIPTION**
10.0 ACTUATOR/DRIVE INSTALL

ITEM	QTY	PART #	DESCRIPTION
1	2	410000419	M4SEMS Screw

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

10.4 Install the Drive Assembly into the Chassis and secure with Screws.



1
(2x)



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 11.0 OPERATION DESCRIPTION CABLE ROUTING AND CONNECTIONS

ITEM	QTY	PART #	DESCRIPTION
1	1	441000971	Vacuum Sensor Cable

11.1 Neatly fold the GPV Cable and then route the Power Supply and GPV Cables through the Cable Clamp. Snap the Cable Clamp closed



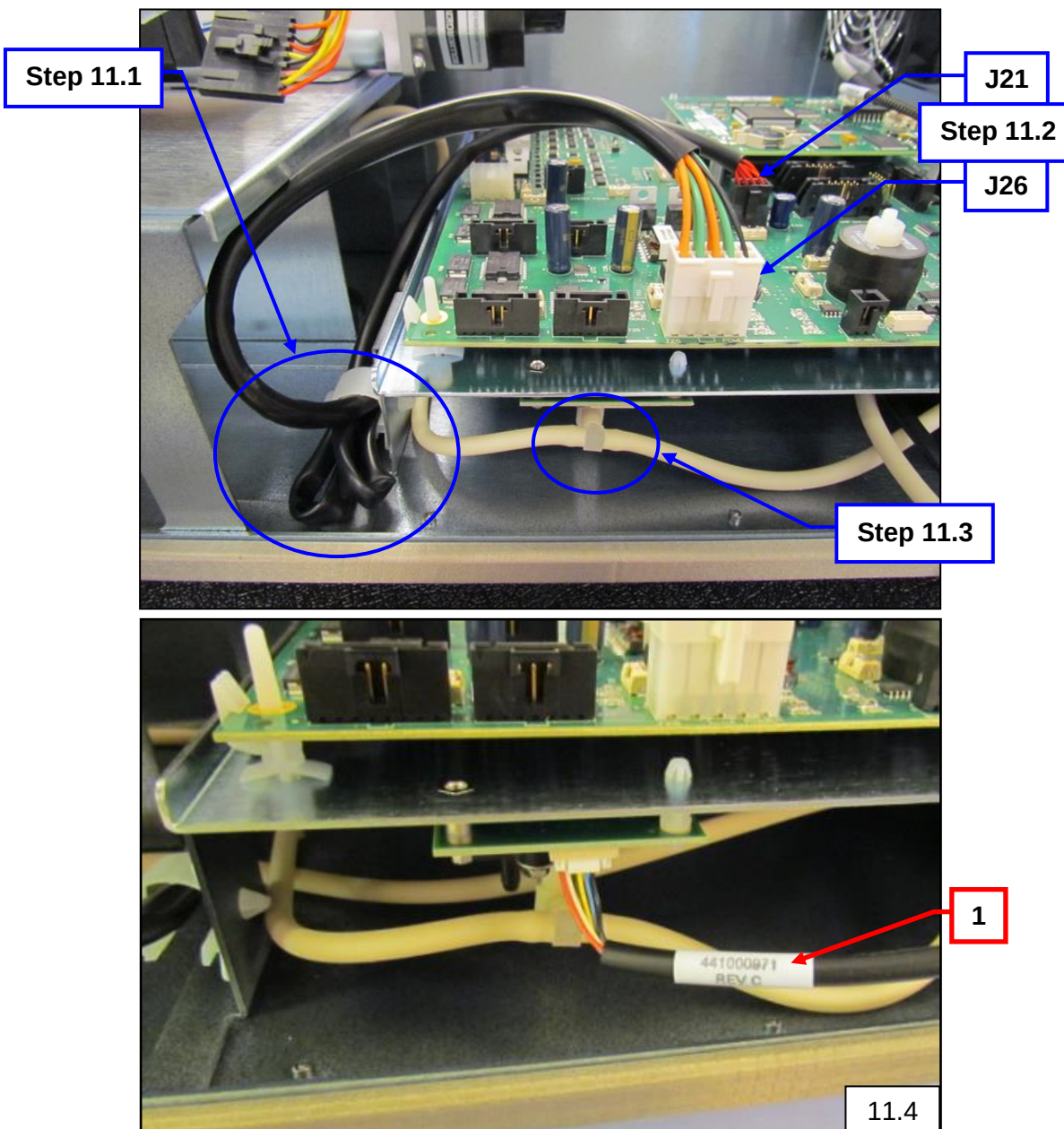
Use ESD precautions when handling PCBs.

11.2 Plug into the Personality Board:

J26 - Power Supply
J21 - GPV

11.3 Install the Degasser Tubing/Barb into the Flow Restrictor on the Degasser Board.

11.4 Install the Vacuum Sensor Cable to the Degasser PCB.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION
11.0 CABLE ROUTING AND CONNECTIONS



Use ESD precautions when handling PCBs.

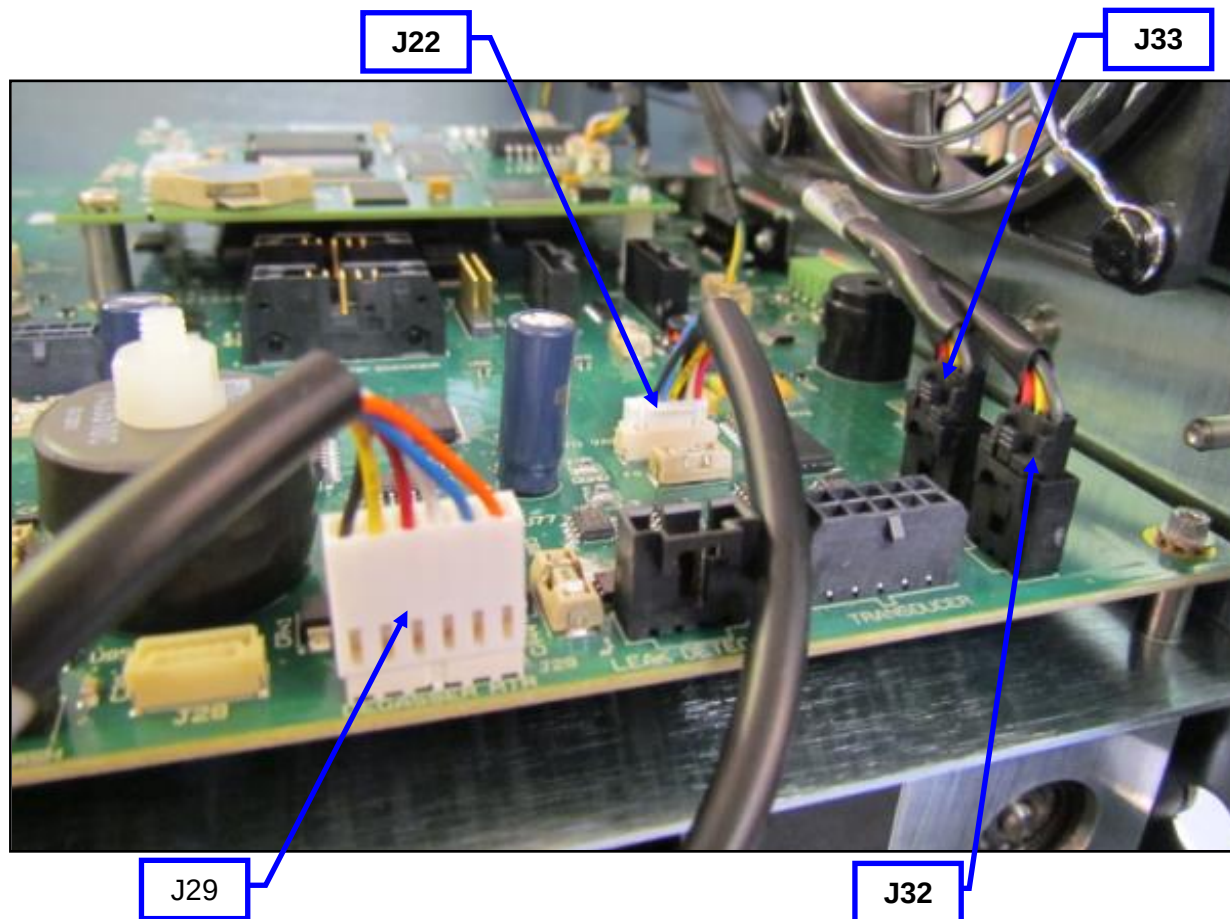
11.5 Make Cable connections to the Personality Board as follows:

J22 - Vacuum Sensor Cbl (441000971)

J29 - Degasser Motor Cbl (441000975)

J33 - Far side Fan Cable

J32 - Near side Fan Cable



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION
11.0 CABLE ROUTING AND CONNECTIONS

ITEM	QTY	PART #	DESCRIPTION
1	2	WAT027033	Cable Tie

TOOL #	DESCRIPTION
N/A	Cutters

ESD

Use ESD precautions when handling PCBs.

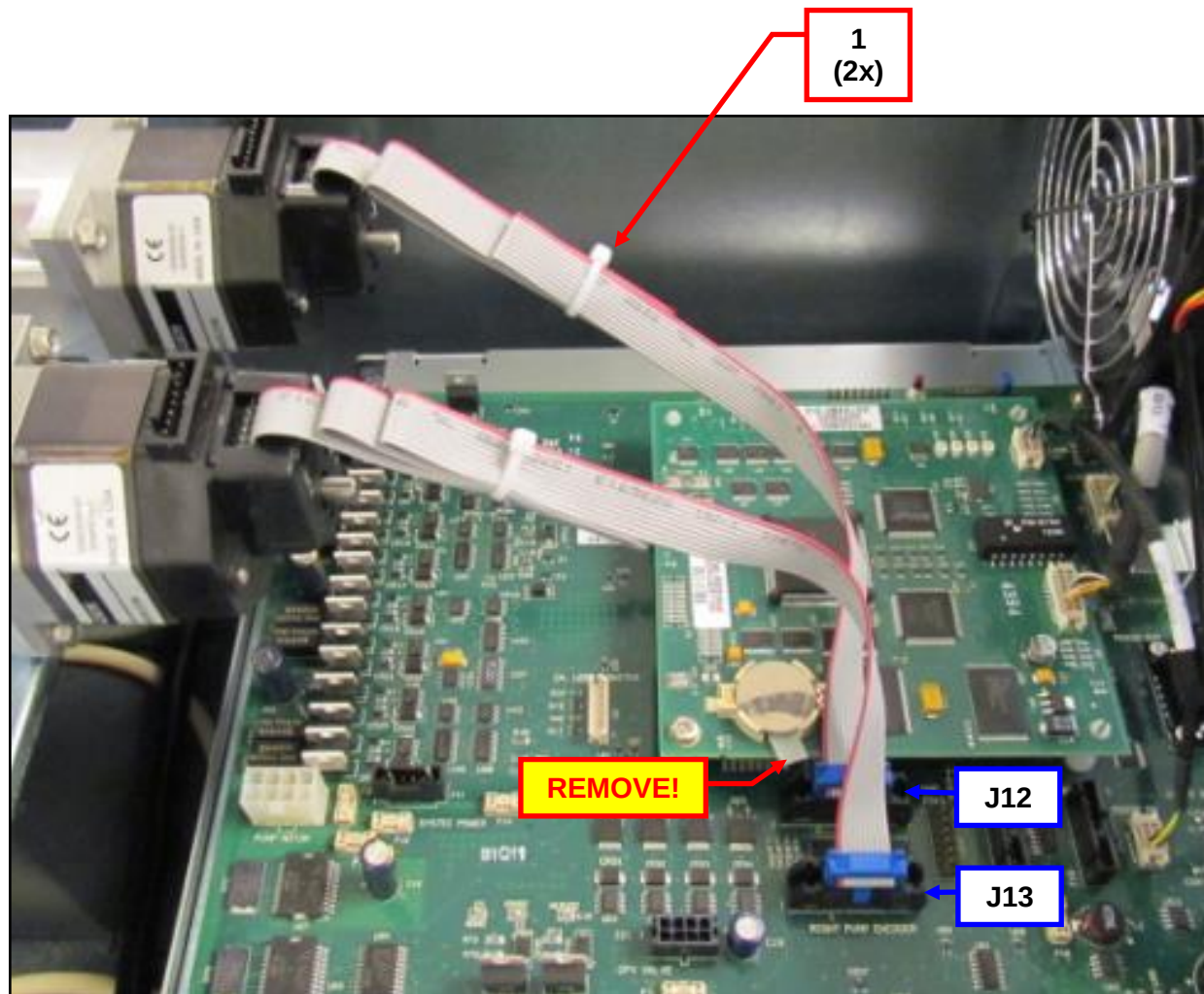
11.6 Make Cable connections to the Personality Board as follows:

J12 - Far side (**Primary**) actuator encoder

J13 - Near side (**Accumulator**) actuator encoder

Fold the excess Encoder Cable, and tie with a Cable Tie for both Actuators.

Remove the plastic insulator from under the Battery on the CPU Board.



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 53 of 81

OPER OPERATION DESCRIPTION
11.0 CABLE ROUTING AND CONNECTIONS

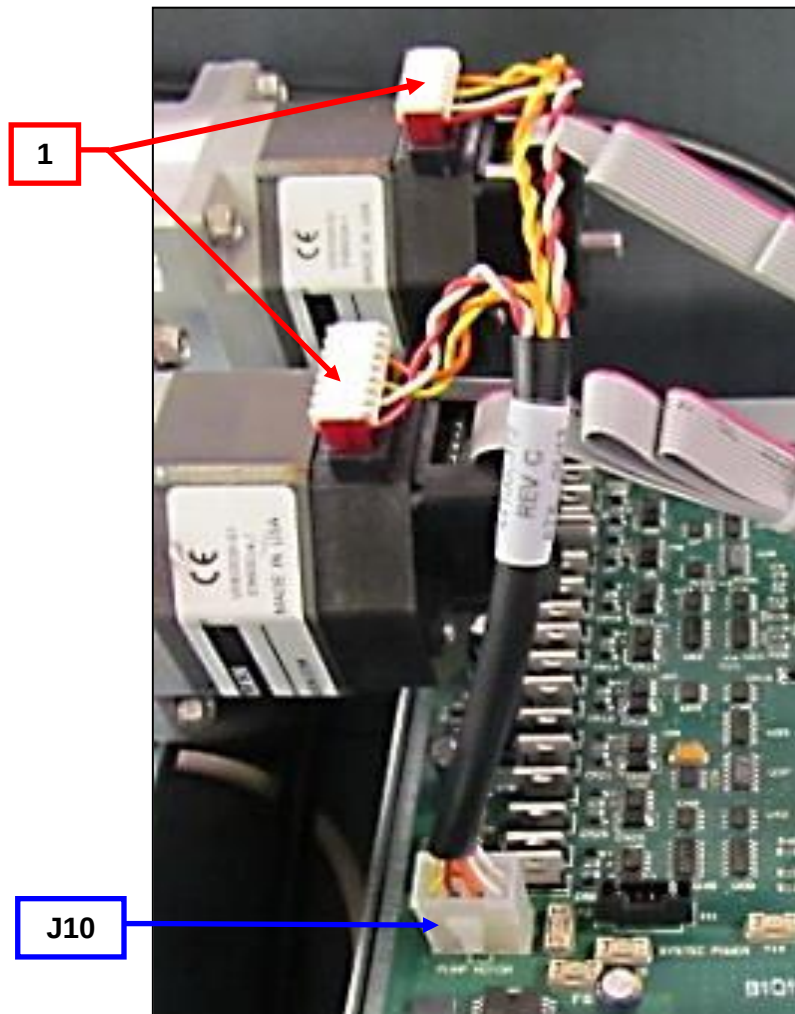
ITEM	QTY	PART #	DESCRIPTION
1	1	441000972	Pump Motor Cable

ESD

Use ESD precautions when handling PCBs.

11.7 Connect the Motor Cable to J10.

Install the Pump Motor Cable to the two Actuators.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER **OPERATION DESCRIPTION**
11.0 **CABLE ROUTING AND CONNECTIONS**

ITEM	QTY	PART #	DESCRIPTION
1	1	WAT027033	Cable Tie

TOOL #	DESCRIPTION
N/A	Cutters



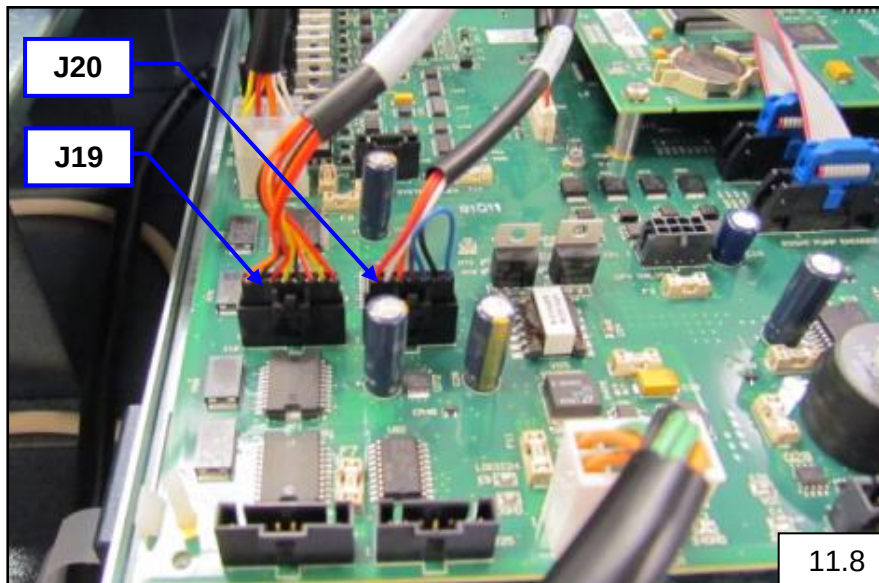
Use ESD precautions when handling PCBs.

11.8 Install the Valve Motor Cables as follows:

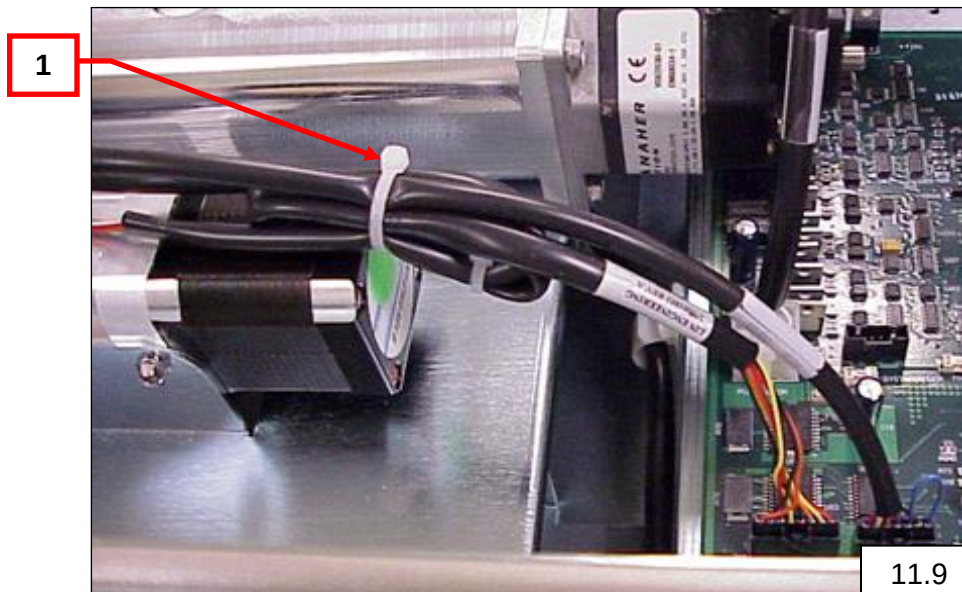
J19 - Drive Asm Motor Cable (279001853)

J20 - Drive Asm Body Cable (441000987)

11.9 Cable Tie the excess Drive Cable length as shown.



11.8



11.9



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 11.0 OPERATION DESCRIPTION
CABLE ROUTING AND CONNECTIONS

ITEM	QTY	PART #	DESCRIPTION
1	1	WAT027033	Cable Tie

TOOL #	DESCRIPTION
N/A	Cutters



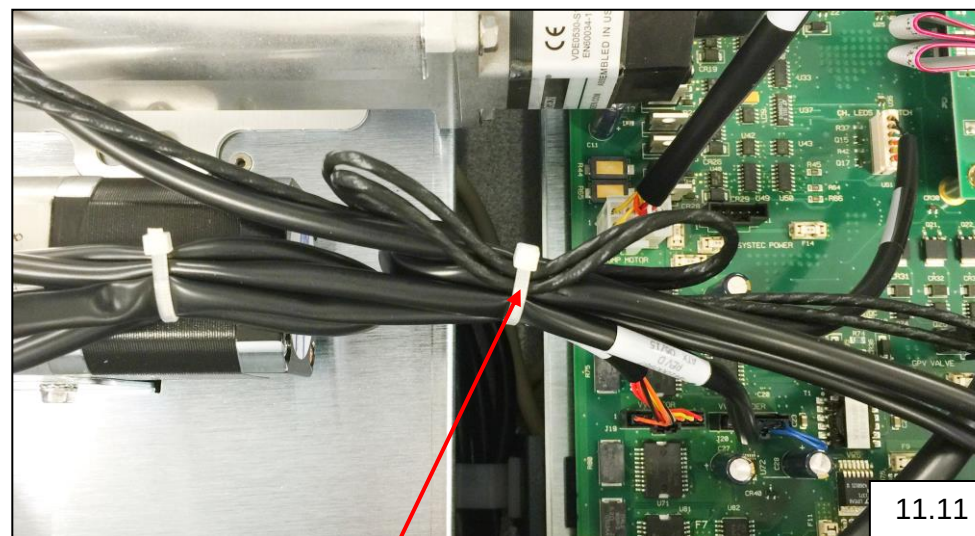
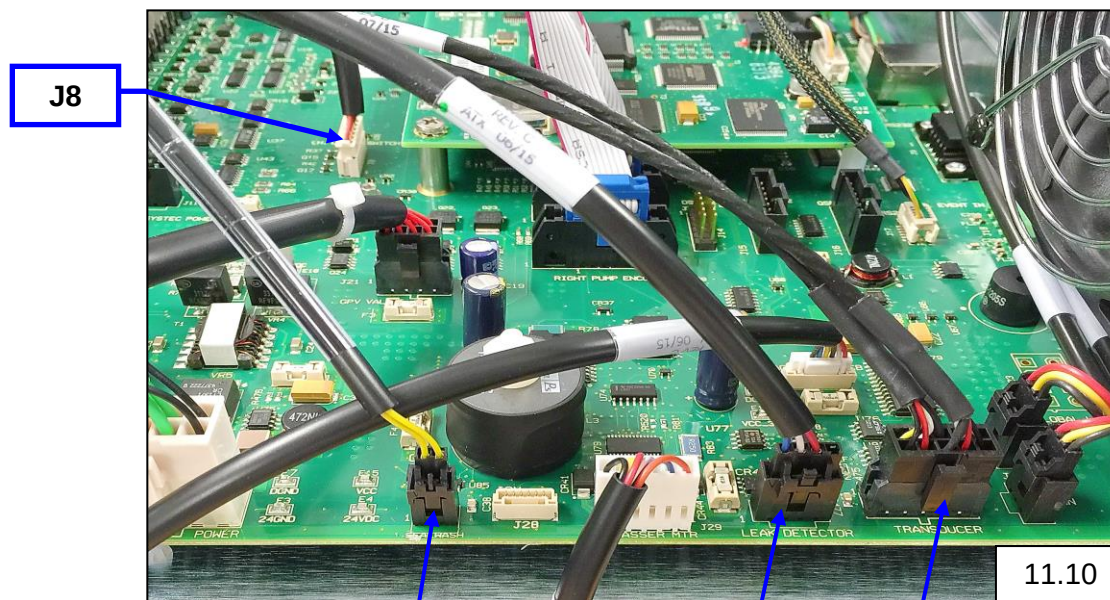
Use ESD precautions when handling PCBs.

11.10 Make Cable connections to the Personality Board as follows:

- J8 - Power Stat Cable 441000973
- J27 - Seal Wash Cable 279003098
- J30 - Leak Detect Cable 441000862
- J31 - Transducer Cable 441001631

11.11 Cable Tie all four cables to the Valve Drive Cables.

NOTE: Loop Transducer Cable when Cable Tying to Valve Drive Cables.



1



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 12.0 OPERATION DESCRIPTION FRONT BULKHEAD ASSEMBLY

ITEM	QTY	PART #	DESCRIPTION
1	33"	430001856	Tygon Tubing

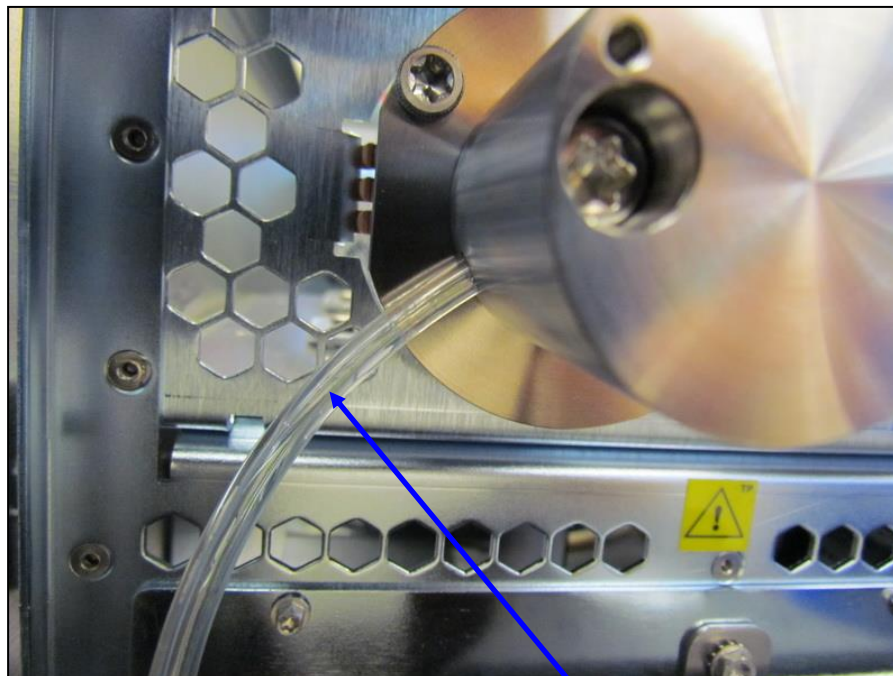
TOOL #	DESCRIPTION
999028109	Tubing Press Pliers
N/A	Razor Blade or Equivalent
N/A	Measuring Tape or Equivalent

12.1 Cut Tygon Tubing to the following lengths:

QTY	LENGTH
1	19 inches
1	4 inches
1	10 inches

NOTE: Tubing can be cut prior to start of build, or at any time during the build.

Attach one end of 19" tube to the Primary Actuator. Route the tubing down and under the GPV and attach the opposite end to the rear barb on Drip Tray. Both ends must be bottomed on the barbed fittings.



19" tube



Verify



Scan



Torque



Critical Clean



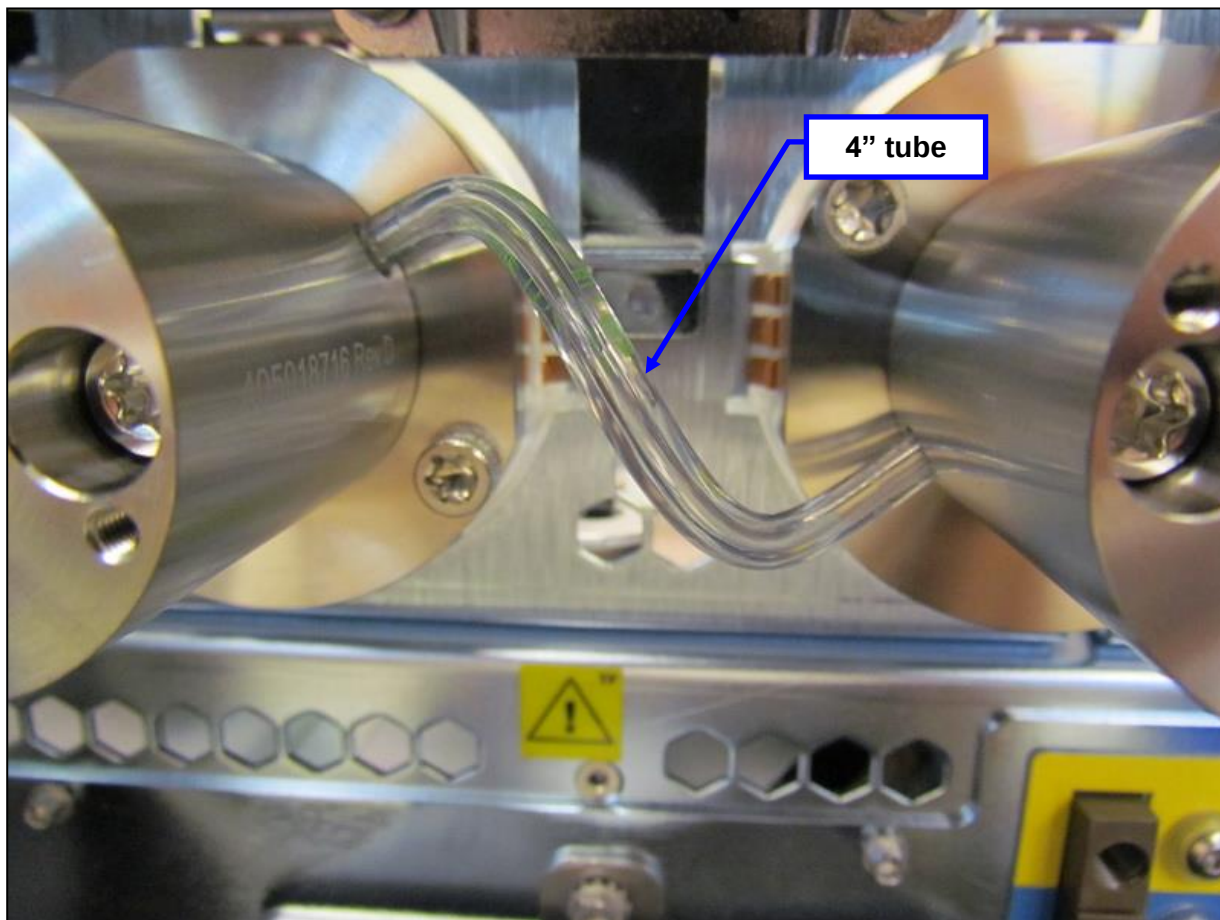
Electrostatic

730001259 V 00 Page 57 of 81

OPER OPERATION DESCRIPTION
12.0 FRONT BULKHEAD ASSEMBLY

TOOL #	DESCRIPTION
999028109	Tubing Press Pliers

12.2 Attach the 4 inch tube between the two Actuators. Both ends must be bottomed on the barbed fittings.



Verify



Scan



Torque



Critical Clean

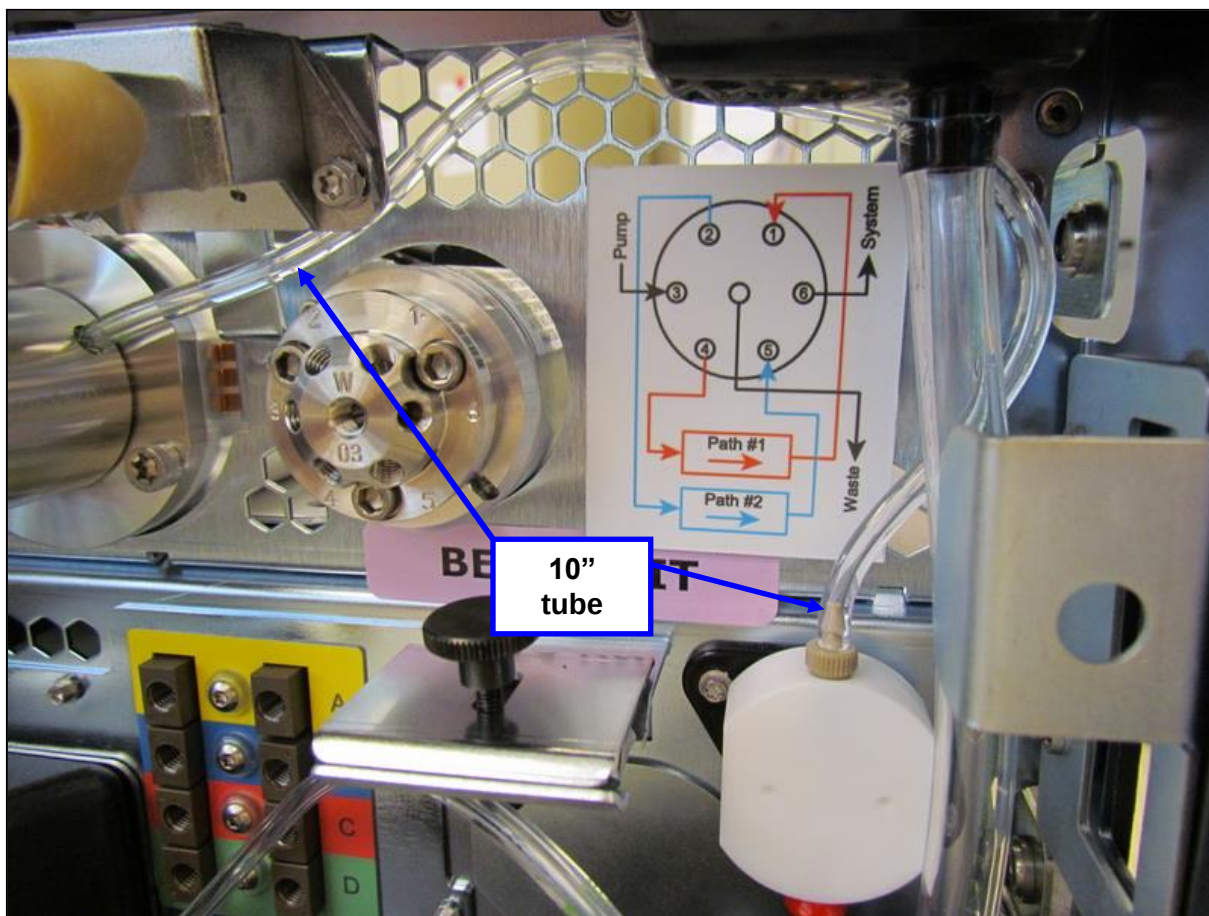


Electrostatic

OPER OPERATION DESCRIPTION
12.0 FRONT BULKHEAD ASSEMBLY

TOOL #	DESCRIPTION
999028109	Tubing Press Pliers

- 12.3 Attach the 10 inch tube to the Accumulator Actuator. Install the opposite end to the Seal Wash. Both ends must be bottomed on the barbed fittings.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER **OPERATION DESCRIPTION**
12.0 FRONT BULKHEAD ASSEMBLY

ITEM	QTY	PART #	DESCRIPTION
1	1	289001771	Spring Loaded Check Valve
2	1	289001940	Dual Ball Check Valve

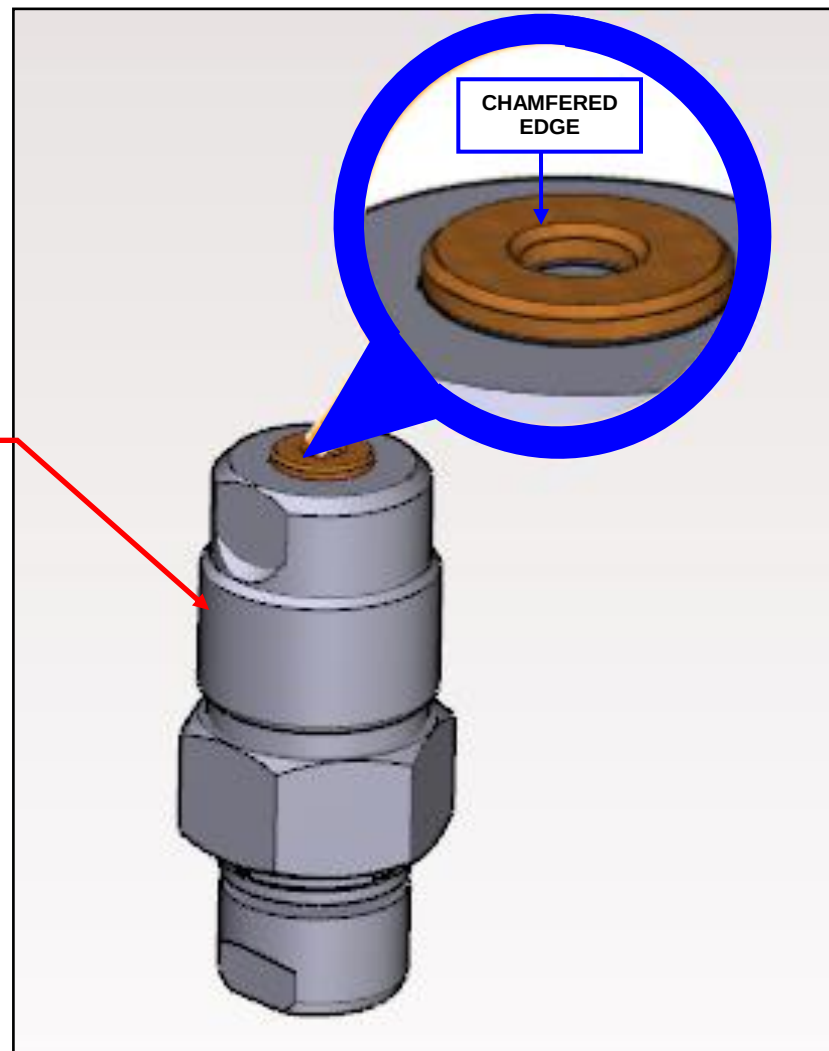
CC

Use Critical Clean precautions.

12.4 Each Check Valve comes with a PEEK Gasket that is packaged in a separate pocket of the bag.

Orient a Peek Gasket with the **CHAMFERED EDGE UP** and press to install to each Check Valve.

1, 2



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION
12.0 FRONT BULKHEAD ASSEMBLY

TOOL #	DESCRIPTION
N/A	1/2 inch wrench

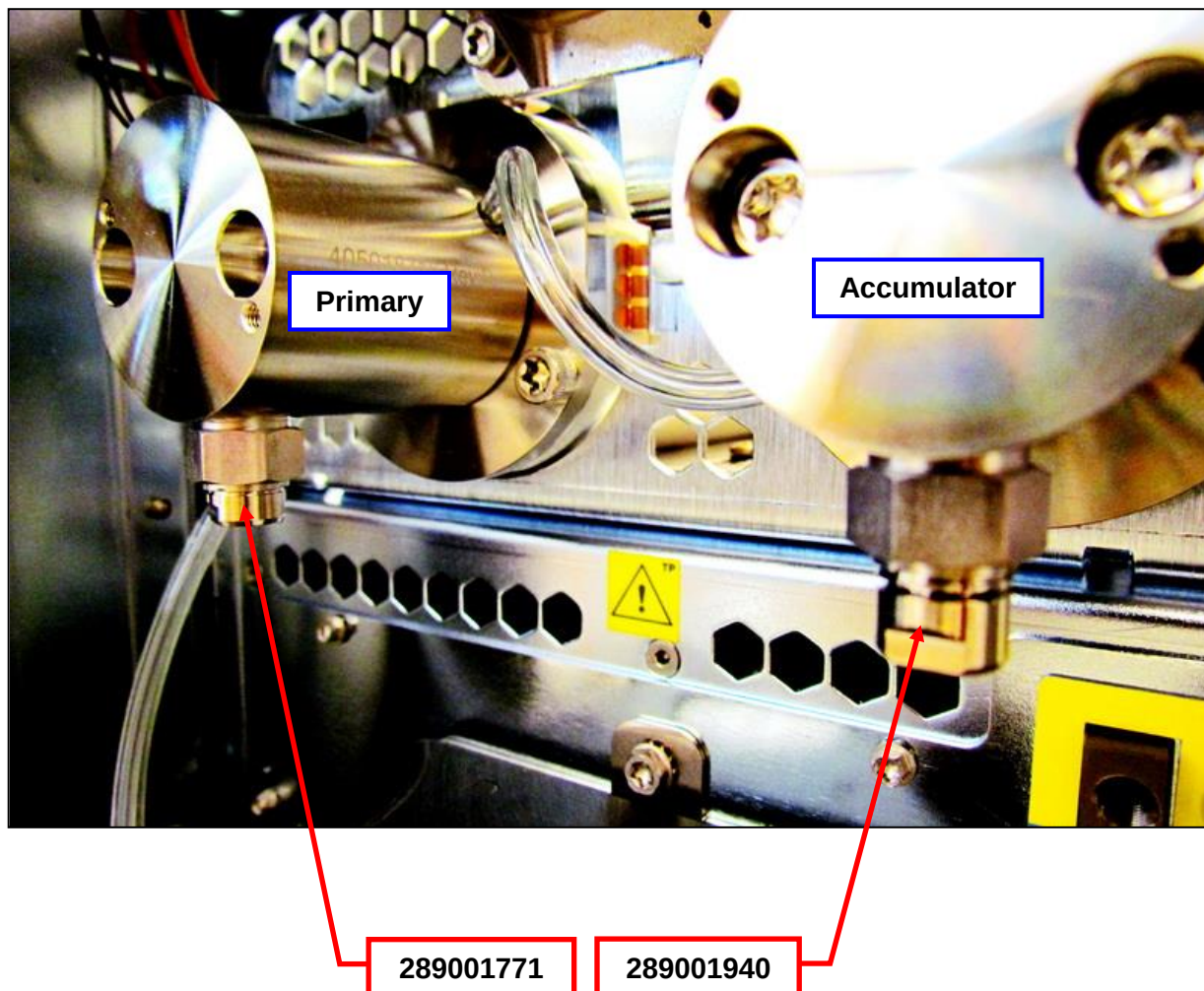
CC

Use Critical Clean precautions.

12.5 Install the **289001771** Spring Loaded Check Valve (the shorter one) to the **Primary** Actuator.

Tighten finger tight, then tighten an additional 1/8th turn with a wrench.

Repeat the above instructions to install the **289001940** Dual Ball Check Valve (the taller one) to the **Accumulator** Actuator.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 12.0 OPERATION DESCRIPTION FRONT BULKHEAD ASSEMBLY

ITEM	QTY	PART #	DESCRIPTION
1	1	430004547	Solvent Inlet Tubes

TOOL #	DESCRIPTION
999026375	Knurl Fitting Side Mount
999032368	Knurl Fitting End Mount
405003294	Manifold, Turret (optional)

CC

Use Critical Clean precautions.

NOTE: Ferrules may be preset using tool # 405003294 (Figure 1).

12.6 Feed the Solvent Inlet lines through the access hole on right side of Chassis, and then install to the Degassers and the Solenoid Pump as follows:

12.7 Install the Brown **SW** marker tube fitting to the inlet port on the Solenoid Pump.



Tighten fitting to 48 in-oz with Tool# 999026375.

Install the remaining tube fittings to the Degasser 'IN' ports as color coded.



Tighten fittings to 48 in-oz with Tool# 999032368.

Route tubing A-D along with seal wash tubing through tubing clip on Drip Tray.

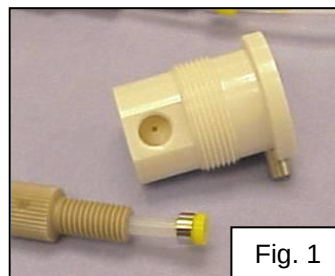
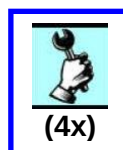


Fig. 1

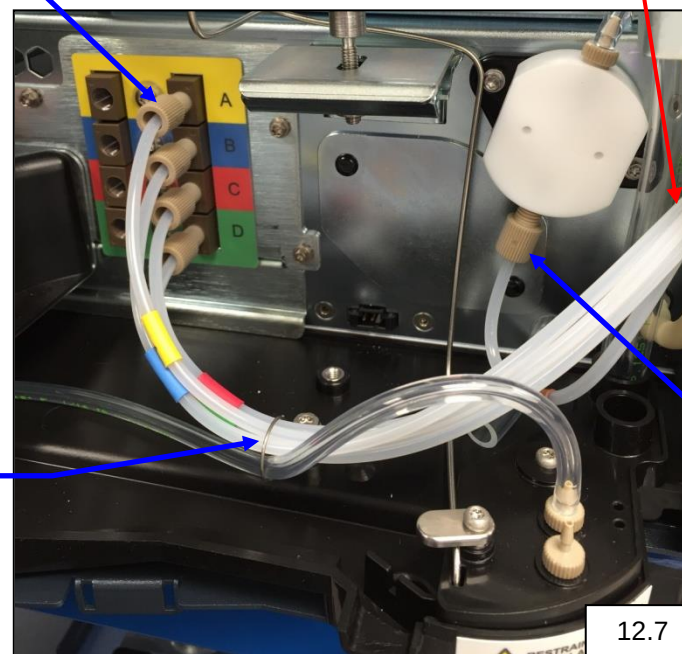


12.6



(4x)

Tubing Clip



12.7



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 13.0 OPERATION DESCRIPTION INSTALL STEEL TUBES

NOTE: Tighten all Steel Tube Fittings to finger tight plus $\frac{3}{4}$ turns. Using a marker, draw a line on the screw. Use this mark to measure torque amount.

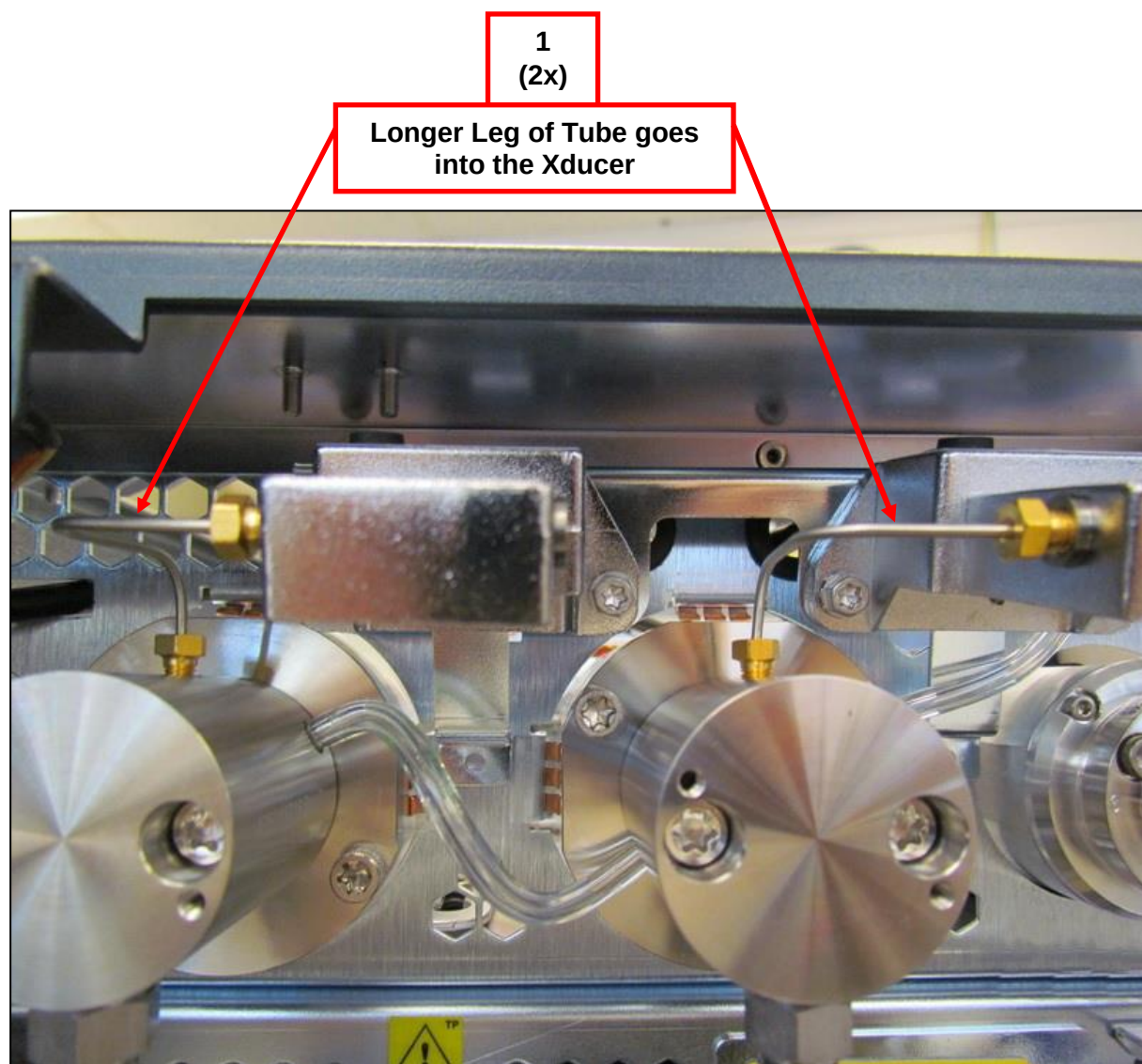
ITEM	QTY	PART #	DESCRIPTION
1	2	430004511	Tube, Head to Xducer

TOOL #	DESCRIPTION
N/A	$\frac{1}{4}$ inch wrench
N/A	Black sharpie marker (or equiv)

CC

Use Critical Clean precautions.

- 13.1 Install the Tube assemblies between the Transducers and the Heads as shown.



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 63 of 81

OPER 13.0 OPERATION DESCRIPTION INSTALL STEEL TUBES

NOTE: Tighten all Steel Tube Fittings to finger tight plus ¾ turns. Using a marker, draw a line on the screw. Use this mark to measure torque amount.

ITEM	QTY	PART #	DESCRIPTION
1	1	430004513	Tube, Xducer to Acc
2	1	430004512	Tube, Xducer to VV

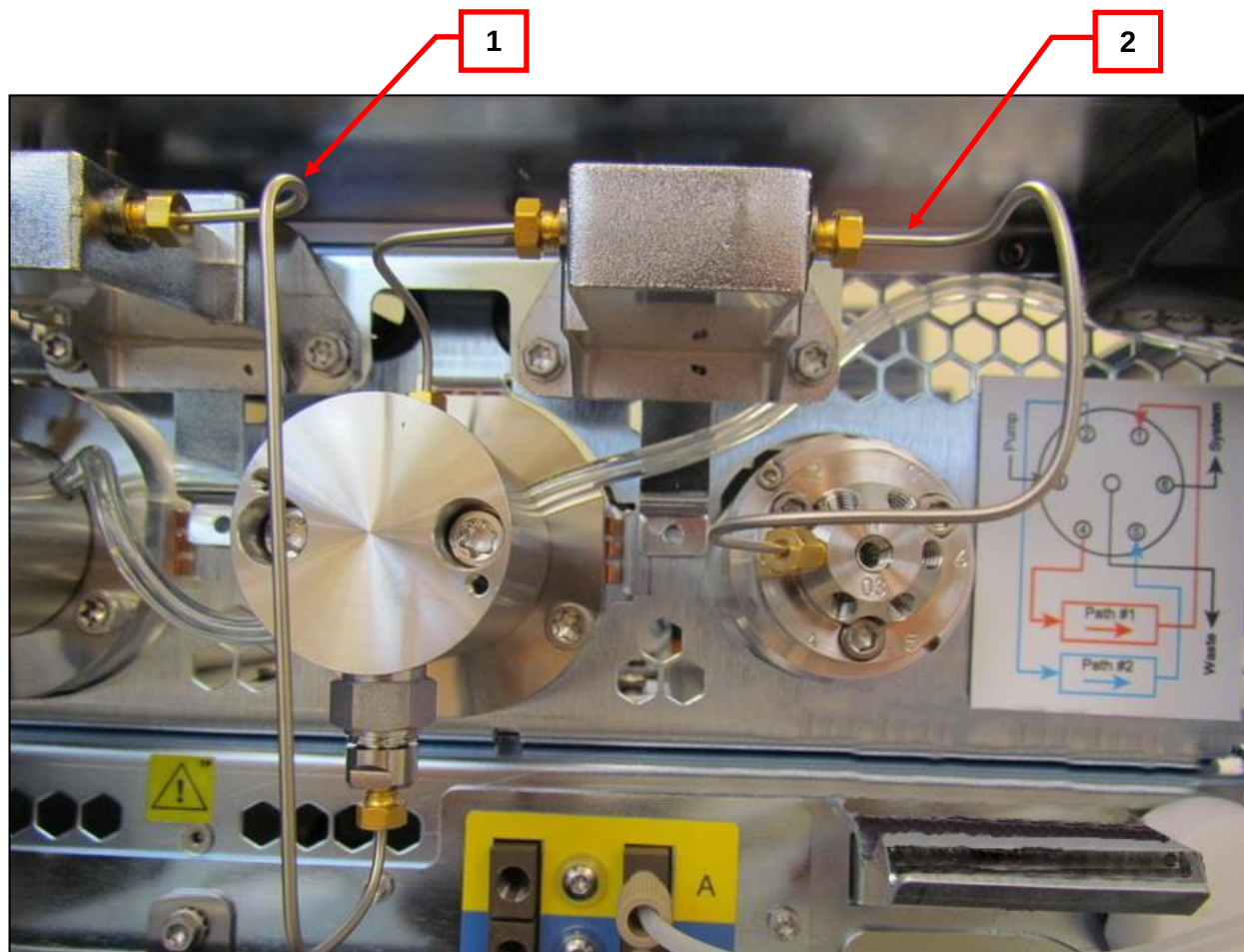
TOOL #	DESCRIPTION
N/A	¼ inch wrench
N/A	Black sharpie marker (or equiv)

CC

Use Critical Clean precautions.

13.2 Install Tube from Primary Transducer to Accumulator Check Valve.

13.3 Install Tube from Accumulator Transducer to Port 3 on Vent Valve



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 64 of 81

OPER **OPERATION DESCRIPTION**
13.0 INSTALL STEEL TUBES

NOTE: Tighten all Steel Tube Fittings to finger tight plus $\frac{3}{4}$ turns. Using a marker, draw a line on the screw. Use this mark to measure torque amount.

ITEM	QTY	PART #	DESCRIPTION
1	1	430004630	Tube, VV to Waste

TOOL #	DESCRIPTION
N/A	$\frac{1}{4}$ inch wrench
N/A	Black sharpie marker (or equiv)

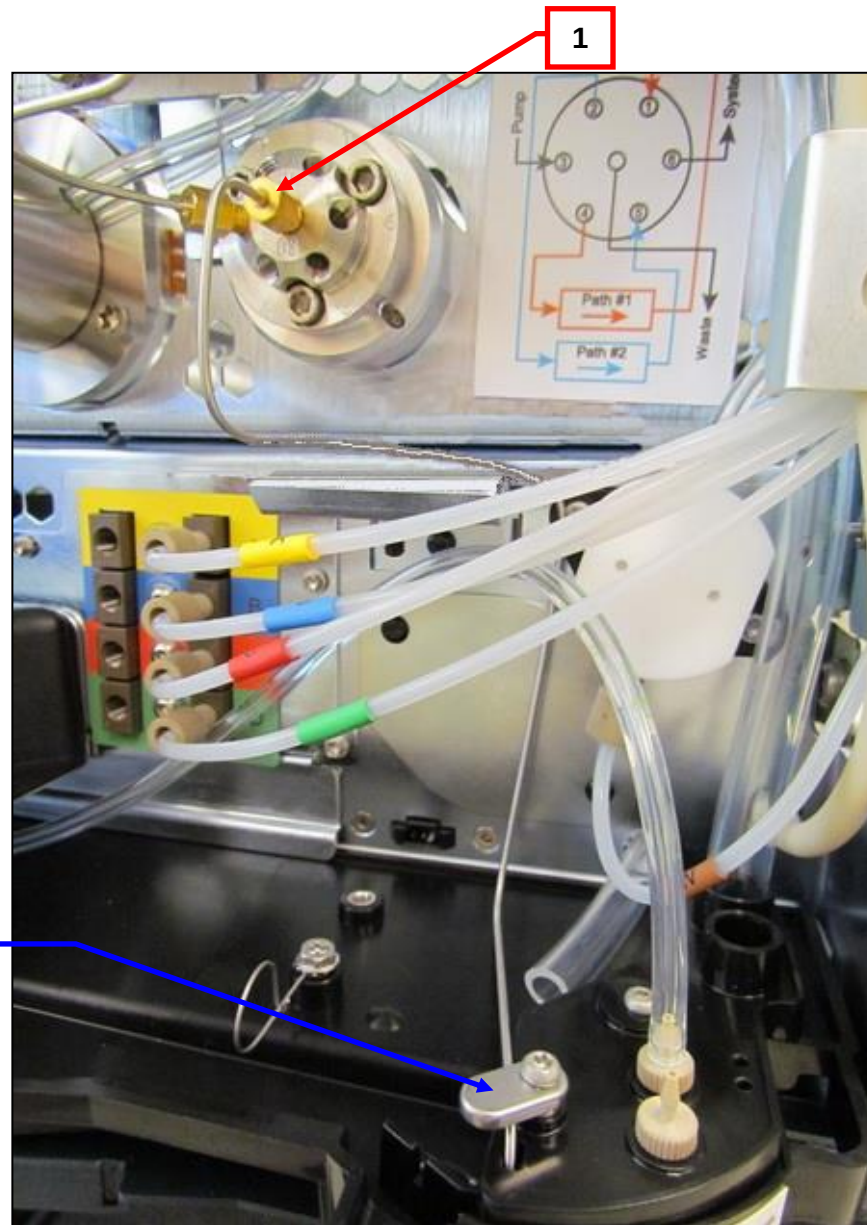
CC

Use Critical Clean precautions.

13.4 Install Waste Tube to center port (W) on Vent Valve.

Route Tube under the Retainer Clip on the Drip Tray.

Retainer
Clip



Verify



Scan



Torque



Critical Clean



Electrostatic

730001259 V 00 Page 65 of 81

OPER 13.0 OPERATION DESCRIPTION INSTALL STEEL TUBES

NOTE: Tighten all Steel Tube Fittings to finger tight plus ¾ turns. Using a marker, draw a line on the screw. Use this mark to measure torque amount.

ITEM	QTY	PART #	DESCRIPTION
1	1	289012501	Mixer, 4.6mmx30mm
2	1	430004683	Tube,VV P2-Mixer
3	1	430004681	Tube,VV P4/5-Mixer

TOOL #	DESCRIPTION
N/A	¼ inch wrench
N/A	3/8" wrench
N/A	Small vise
N/A	Black sharpie marker (or equiv)

NOTE: This subassembly can be assembled prior to start of the unit build or at any time during the build procedure.

CC

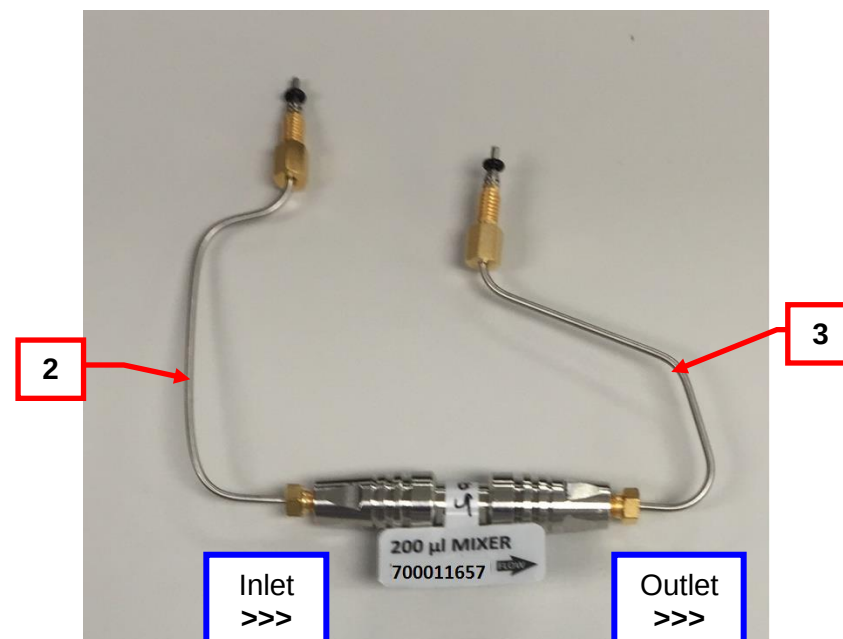
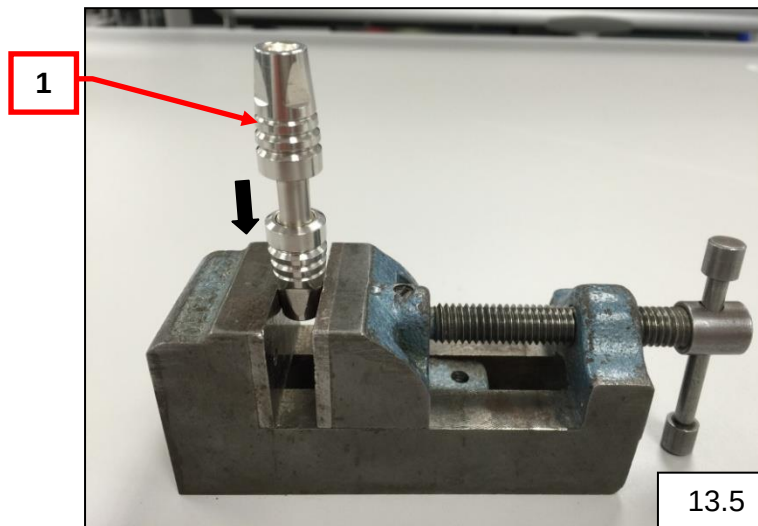
Use Critical Clean precautions.

13.5 Insert Mixer into vise with INLET port exposed.

13.6 Install Tube (430004683) to the INLET side of the Mixer.

Reverse Mixer in vise.

Install Tube (430004681) to the OUTLET side of the Mixer.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 13.0 OPERATION DESCRIPTION

13.0 INSTALL STEEL TUBES

NOTE: Tighten all Steel Tube Fittings to finger tight plus ¾ turns. Using a marker, draw a line on the screw. Use this mark to measure torque amount.

ITEM	QTY	PART #	DESCRIPTION
1	1	289012516	Mixer, 4.6mmx100mm
2	1	430004681	Tube,VVP4-5-Mixers
3	1	430004684	Tube,VV P1- Mixer

TOOL #	DESCRIPTION
N/A	¼ inch wrench
N/A	3/8" wrench
N/A	Small vise
N/A	Black sharpie marker (or equiv)

NOTE: This subassembly can be assembled prior to start of the unit build or at any time during the build procedure.

CC

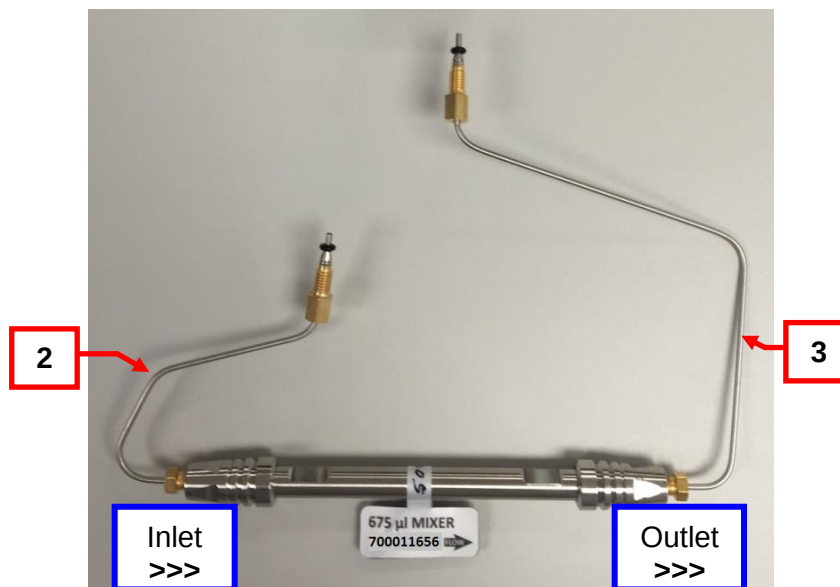
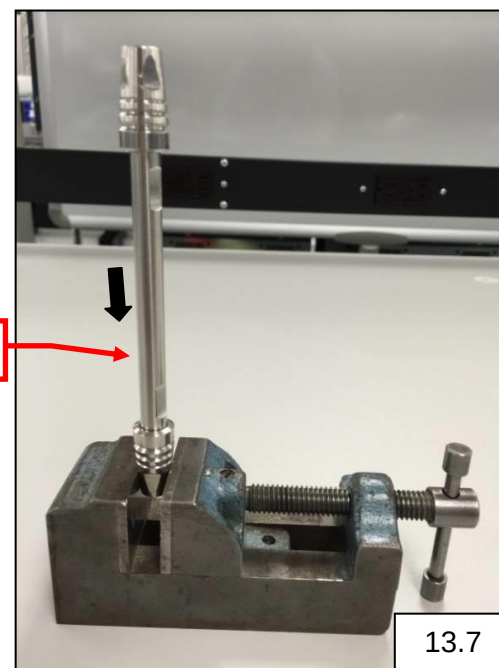
Use Critical Clean precautions.

13.7 Insert Mixer into vise with INLET port exposed.

13.8 Install Tube (430004681) to the INLET side of the Mixer.

Reverse Mixer in Vise.

Install Tube (430004684) to the OUTLET side Mixer.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 13.0 OPERATION DESCRIPTION INSTALL STEEL TUBES

NOTE: Tighten all Steel Tube Fittings to finger tight plus $\frac{3}{4}$ turns. Using a marker, draw a line on the screw. Use this mark to measure torque amount.

ITEM	QTY	PART #	DESCRIPTION
1	1	400007352	Clamp Cover
2	1	410005586	Thumb Screw

TOOL #	DESCRIPTION
N/A	$\frac{1}{4}$ inch wrench

CC Use Critical Clean precautions.

13.9 Install Mixer and Tubing Assemblies, **flow direction left to right**. See Ref.

Mixer #1 (long mixer, rear location)

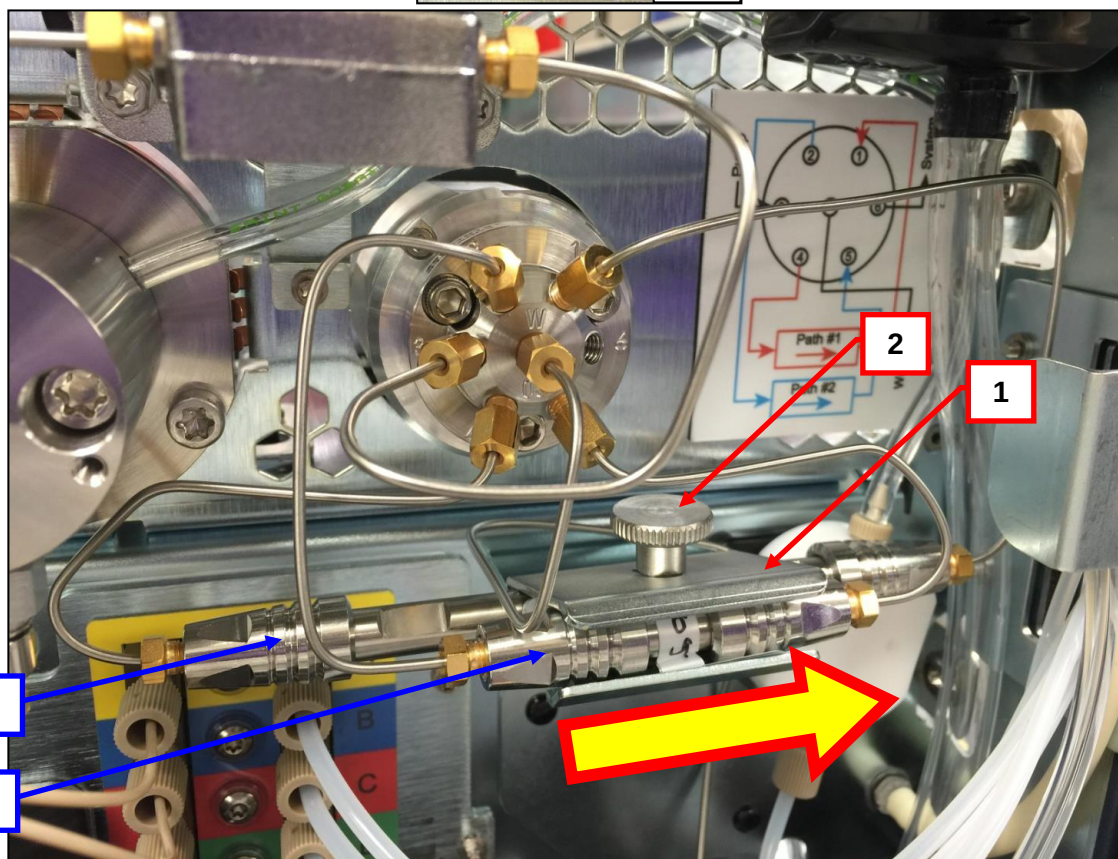
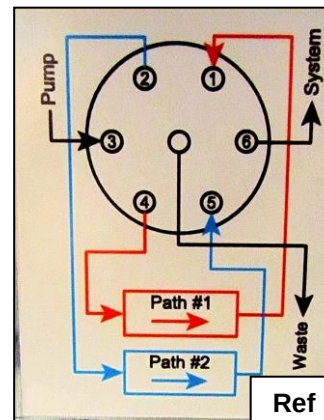
- Inlet tube goes from left side of mixer to port 4 on Vent Valve
- Outlet tube goes from right side of mixer to port 1 on Vent Valve

Mixer #2 (short mixer, front location)

- Inlet tube goes from left side of mixer to port 2 on Vent Valve
- Outlet tube goes from right side of mixer to port 5 on Vent Valve

NOTE: Tubing will require some bending to reach ports in Vent Valve.

Hold mixers in place with Clamp Cover and Thumb Screws.



Verify



Scan



Torque



Critical Clean

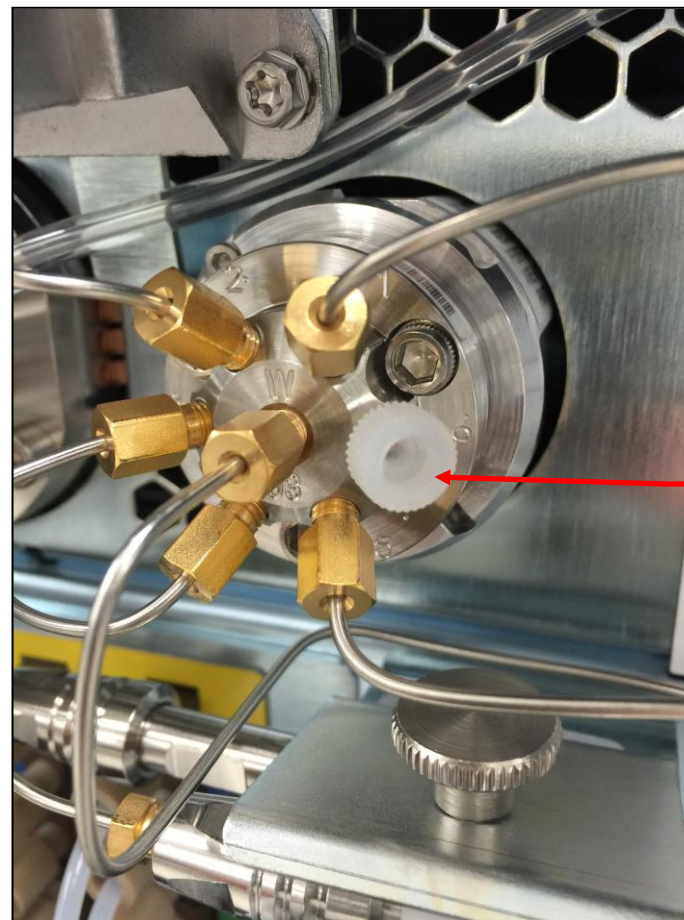


Electrostatic

OPER OPERATION DESCRIPTION
13.0 INSTALL STEEL TUBES

ITEM	QTY	PART #	DESCRIPTION
1	1	410001400	Plug

13.10 Install a Plug to port 6 on the Vent Valve.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 14.0 OPERATION DESCRIPTION INSTALL STEEL AND PEEK TUBES

ITEM	QTY	PART #	DESCRIPTION
1	1	430004510	Tube, GPV to PCV
2	1	430004582	Tubing Kit, GPV

TOOL #	DESCRIPTION
999026375	48 in oz Torque Wrench
999032368	48 in oz Torque Driver
999038140	48 in oz Torque Wrench, Lrg.

CC Use Critical Clean precautions.

14.1 Remove protective inserts from GPV and install (2) Tubes from the Tubing Kit to ports **A** and **D**.



Torque fittings to 48 in-oz. with 999026375

14.2 Install Tubing from center port of GPV to Primary Check Valve.



Torque fittings to 48 in-oz. with 999026375 and 999038140

14.3 Install remaining tubes from the Tubing Kit to ports **B** and **C** of the GPV.

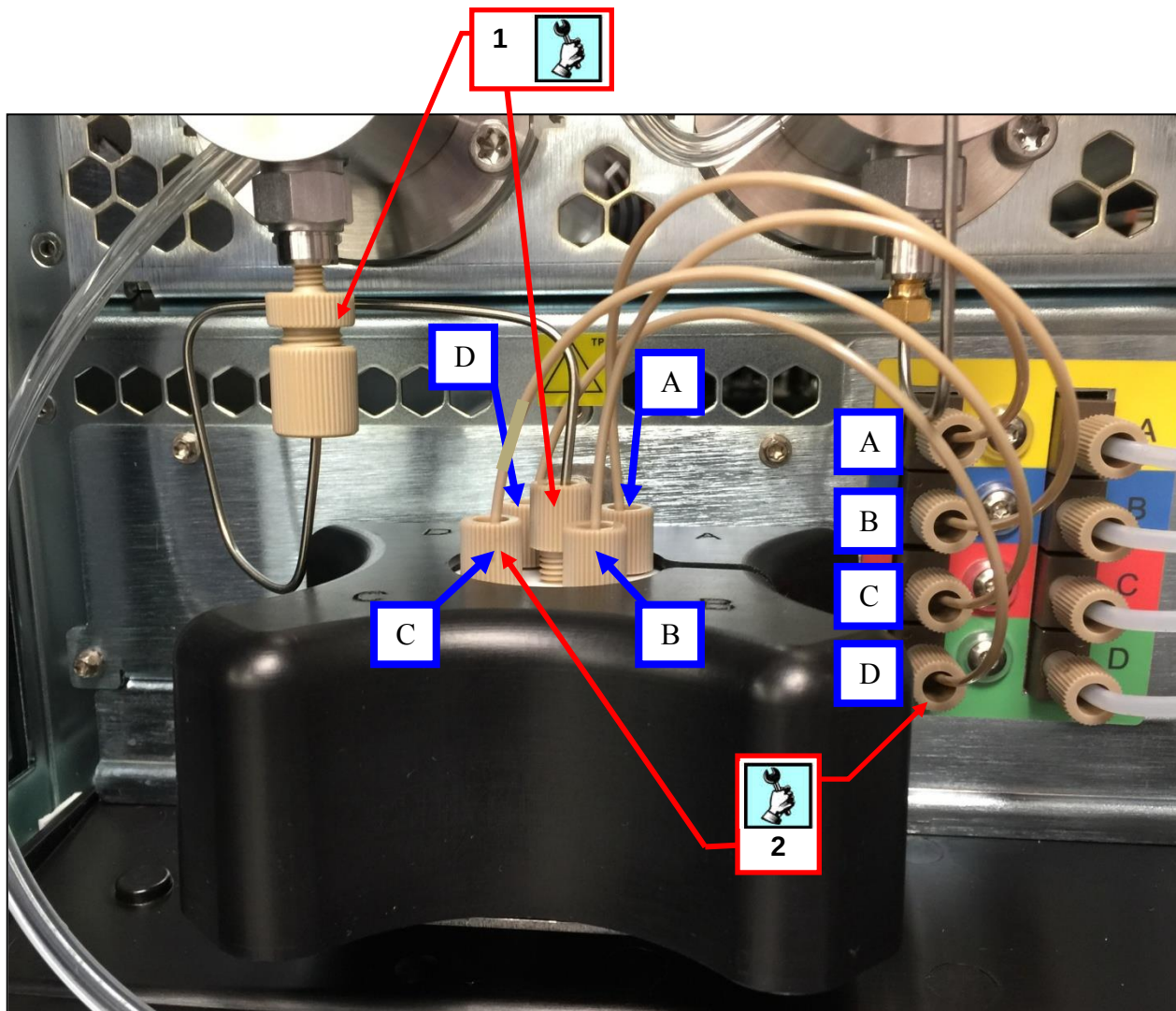


Torque fittings to 48 in-oz. with 999026375

14.4 Install Tubes from GPV to **corresponding ports in Degasser.**



Torque fittings to 48 in-oz. with 999032368



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER 15.0 OPERATION DESCRIPTION
DOOR ASSEMBLY PREP AND INSTALL

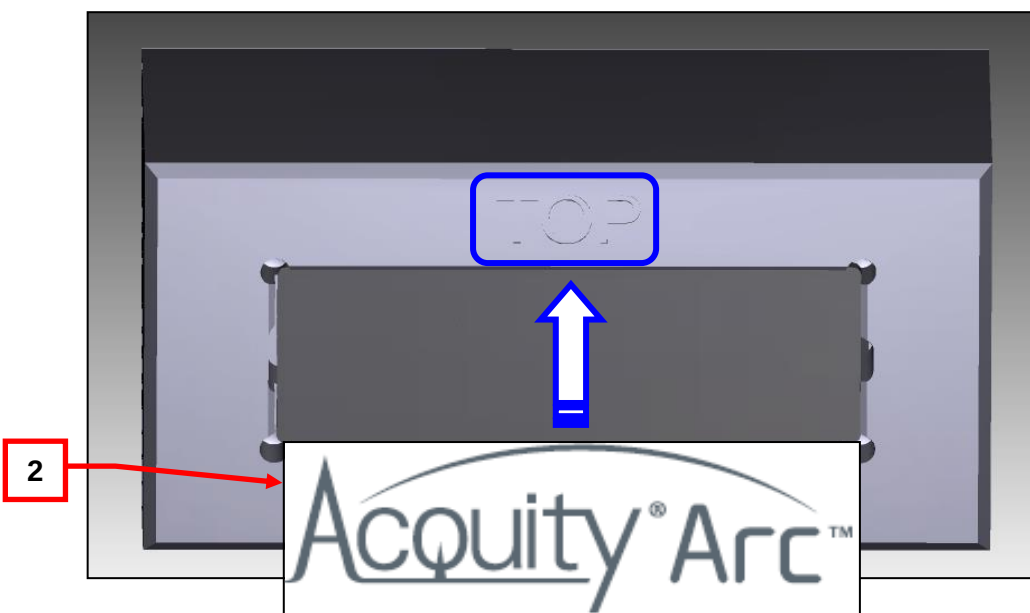
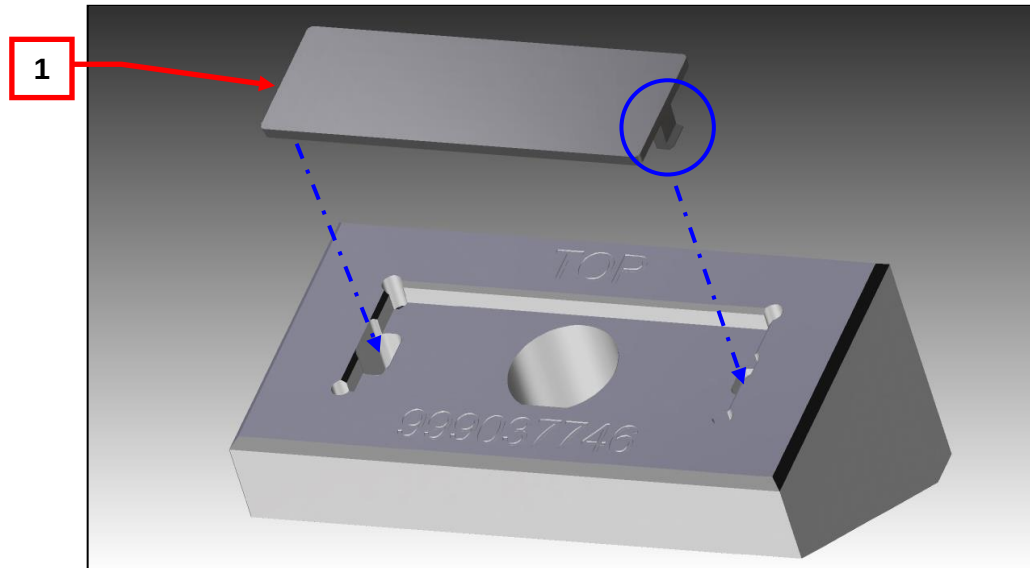
NOTE: The Badge and Door subassemblies can be assembled prior to start of the unit build or at any time during the build procedure.

ITEM	QTY	PART #	DESCRIPTION
1	1	415001977	Snap In Badge
2	1	615004795	Label, Door, Acquity Arc

TOOL #/	DESCRIPTION
999037746	Badge Label Alignment Fixture

15.1 Orient and drop Snap-in Badge into the alignment fixture (tab side down).

Remove adhesive backing from label and orient label with the "TOP" stamped into fixture.



OPER OPERATION DESCRIPTION
15.0 DOOR ASSEMBLY PREP AND INSTALL

ITEM	QTY	PART #	DESCRIPTION
1	1	289008483	Pump Door
2	1	615004781	Label, QSM Pump

15.2 Snap the Badge into the Badge pocket on the door.

Peel protective film from the Badge Label

Peel and stick the QSM Label into the Door pocket.



Verify



Scan



Torque



Critical Clean



Electrostatic

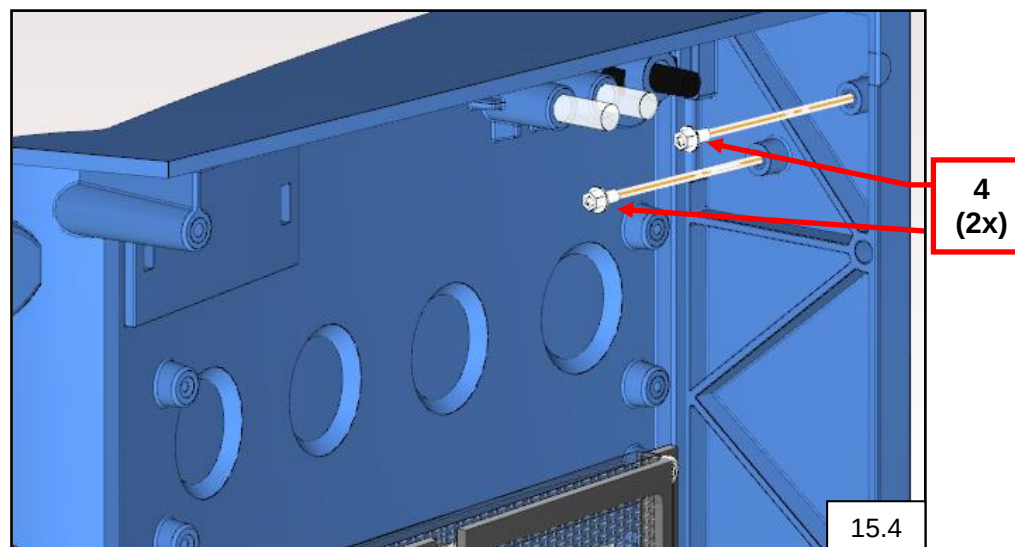
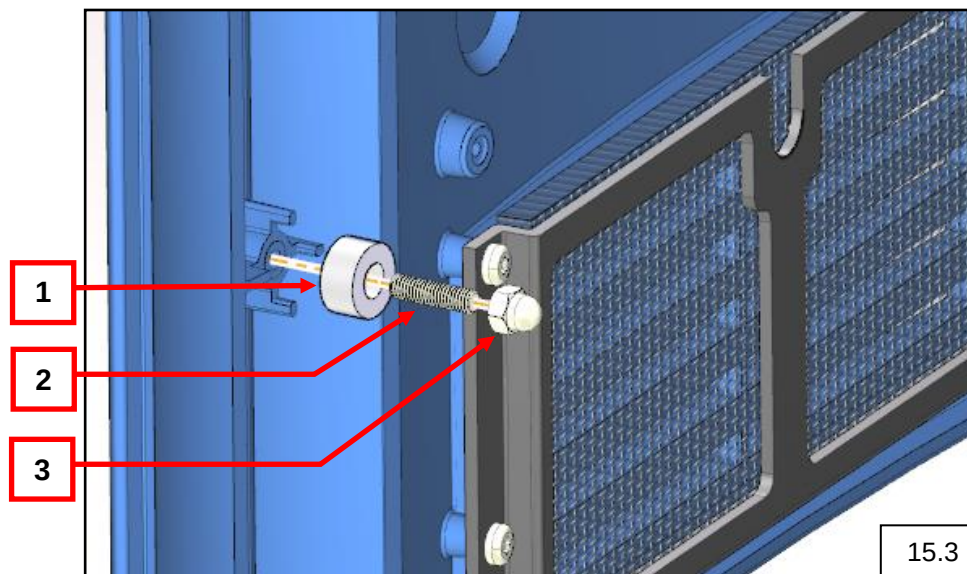
OPER **OPERATION DESCRIPTION**
15.0 **DOOR ASSEMBLY PREP AND INSTALL**

ITEM	QTY	PART #	DESCRIPTION
1	1	410003072	Round Magnet
2	1	410004817	Threaded Stud
3	1	WAT036386	Acorn Nut
4	2	WAT271463	M3 Screw

TOOL #	DESCRIPTION
N/A	7MM Nut Driver
N/A	T10 Torx Driver

15.3 Thread the Nut onto the Stud, and then secure the Round Magnet to the Door with a Nut Driver.

15.4 Partially install (2) Screws into the Door Flange.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION
15.0 DOOR ASSEMBLY PREP AND INSTALL

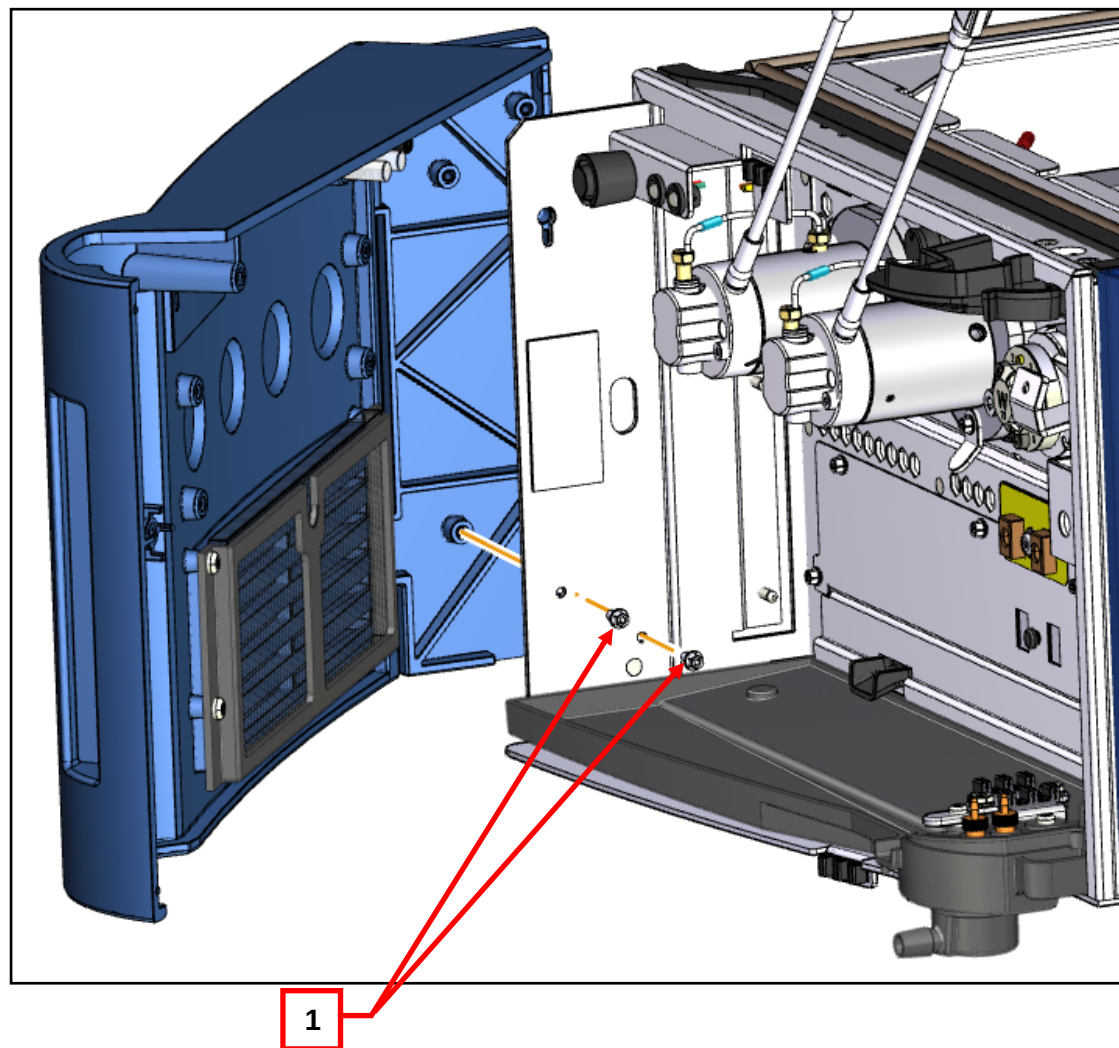
ITEM	QTY	PART #	DESCRIPTION
1	2	WAT271463	M3 SEMS Screws

TOOL #	DESCRIPTION
N/A	T10 Ball Tip Torx Driver

15.5 Hang the Door Assy in place using the two partially installed screws.

Start the two lower screws.

Tighten all (4) Screws to secure the Door to the Chassis.



Verify



Scan



Torque



Critical Clean



Electrostatic

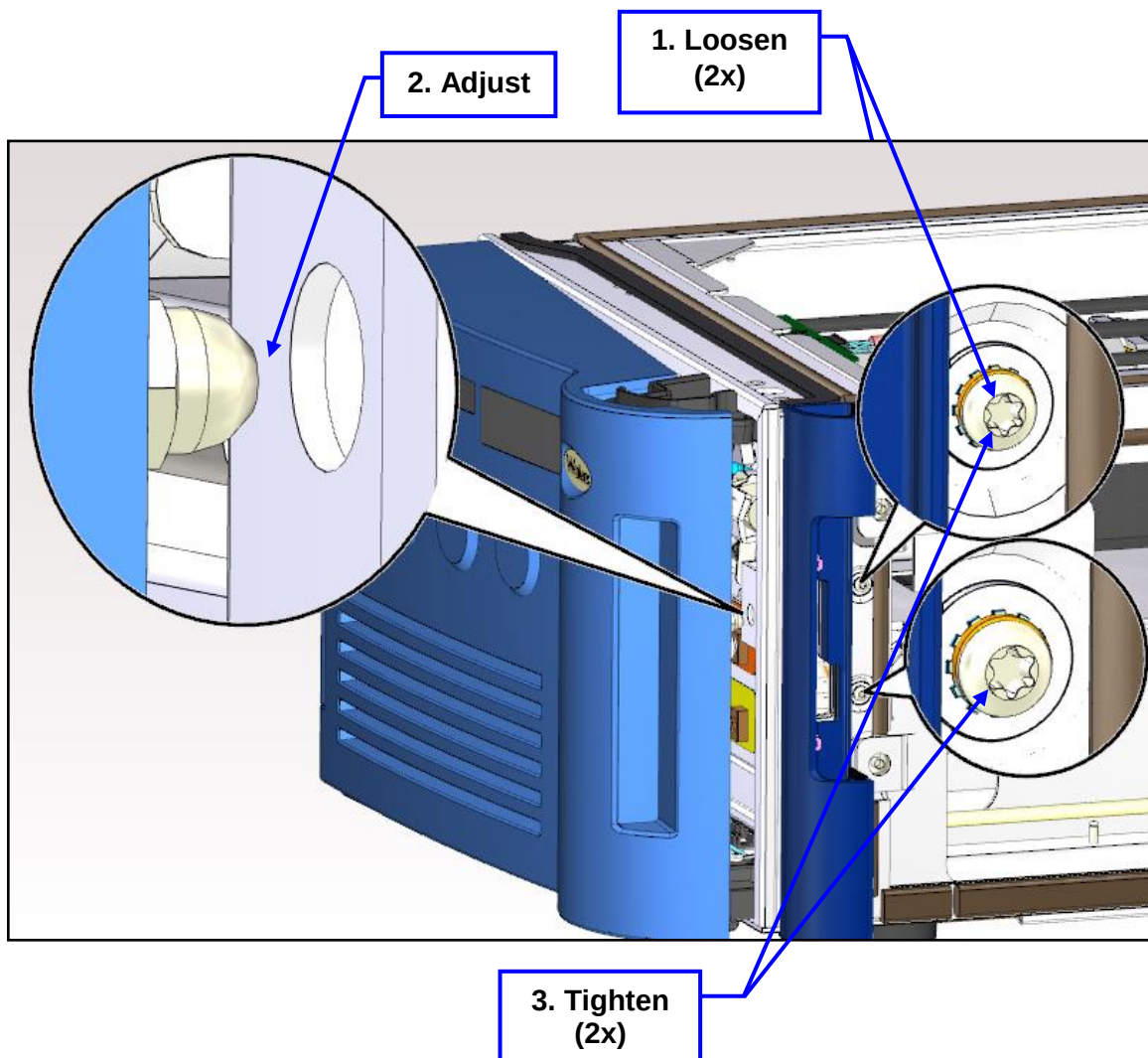
OPER **OPERATION DESCRIPTION**
 15.0 DOOR ASSEMBLY PREP AND INSTALL

TOOL #	DESCRIPTION
N/A	T10 Torx Driver

15.6 If door does not latch smoothly, loosen the two screws holding the bracket to the Chassis.

Adjust the chassis bracket so that the Door assembly will engage the Chassis with smooth operation.

Re-tighten the Screws.



Verify



Scan



Torque



Critical Clean



Electrostatic

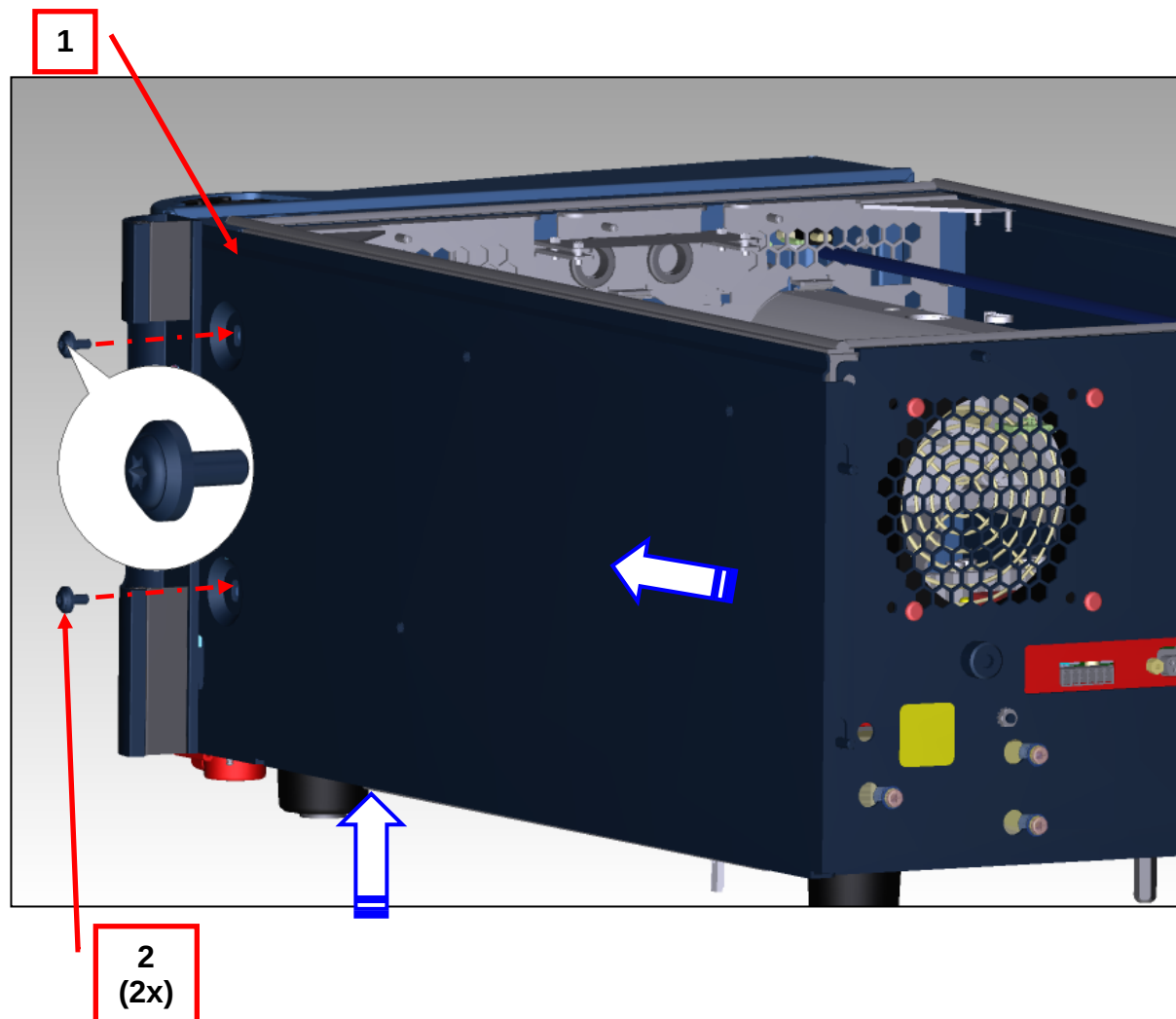
OPER 16.0 OPERATION DESCRIPTION
FINAL ASSEMBLY

ITEM	QTY	PART #	DESCRIPTION
1	1	400007611	Right Side Skin
2	2	410001262	M4 Panel Screw

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

NOTE: The Right Side Skin is a component of Chassis Kit 289010629.

- 16.1 Assemble the Right Side Skin to the Chassis. The Skin should be all the way forward, and raised as much as possible before securing with Screws.



Verify



Scan



Torque



Critical Clean



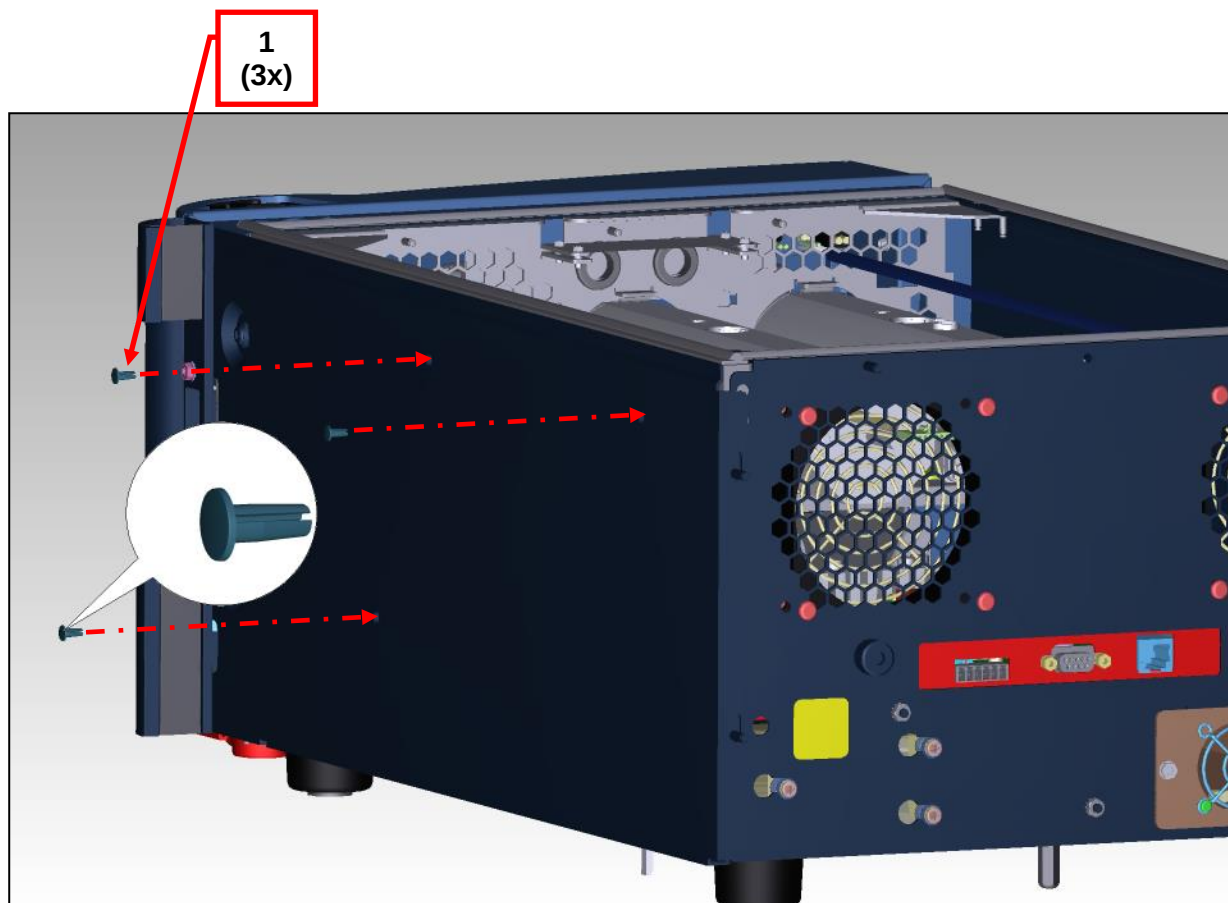
Electrostatic

OPER 16.0 OPERATION DESCRIPTION
FINAL ASSEMBLY

ITEM	QTY	PART #	DESCRIPTION
1	3	415002777	Hole Plug

16.2 Install Hole Plugs into the three holes in the Right Side Skin.

NOTE: These Plugs can be installed to the Right Side Skin prior to start of the unit build or at any time during the build procedure.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION
16.0 FINAL ASSEMBLY

ITEM	QTY	PART #	DESCRIPTION
1	1	WAT049630	Caution Label

16.3 Attach a Caution Label to the Right Side Skin.

NOTE: This label can be applied prior to start of the unit build or at any time during the build procedure.



Verify



Scan



Torque



Critical Clean



Electrostatic

OPER OPERATION DESCRIPTION
16.0 FINAL ASSEMBLY

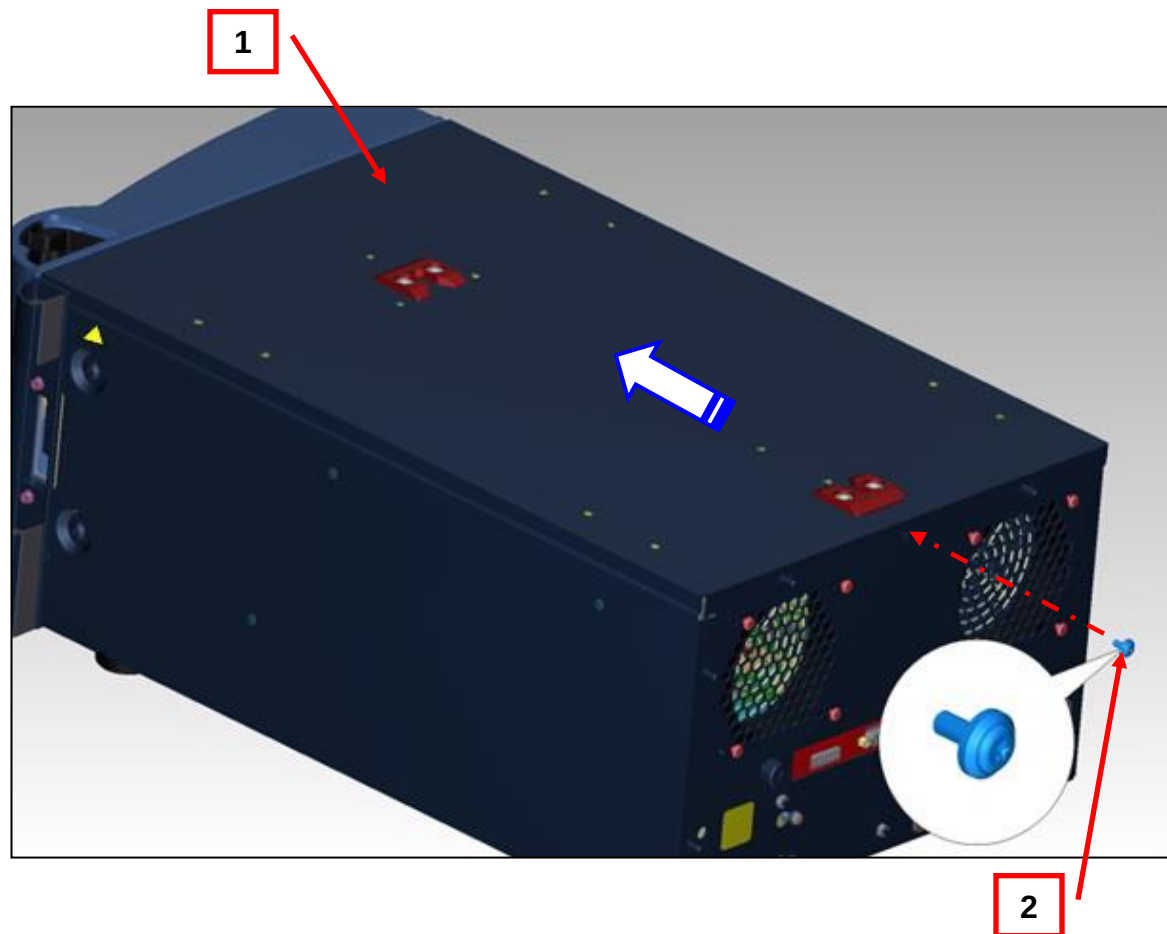
ITEM	QTY	PART #	DESCRIPTION
1	1	400005839	Cover
2	1	410001262	M4 Panel Screw

TOOL #	DESCRIPTION
N/A	T20 Torx Driver

NOTE: The Cover is a component of Chassis Kit 289010629.

16.4 Assemble the Cover to the Chassis.

The Cover should be all the way forward before securing with (1) Screw.



Verify



Scan



Torque



Critical Clean

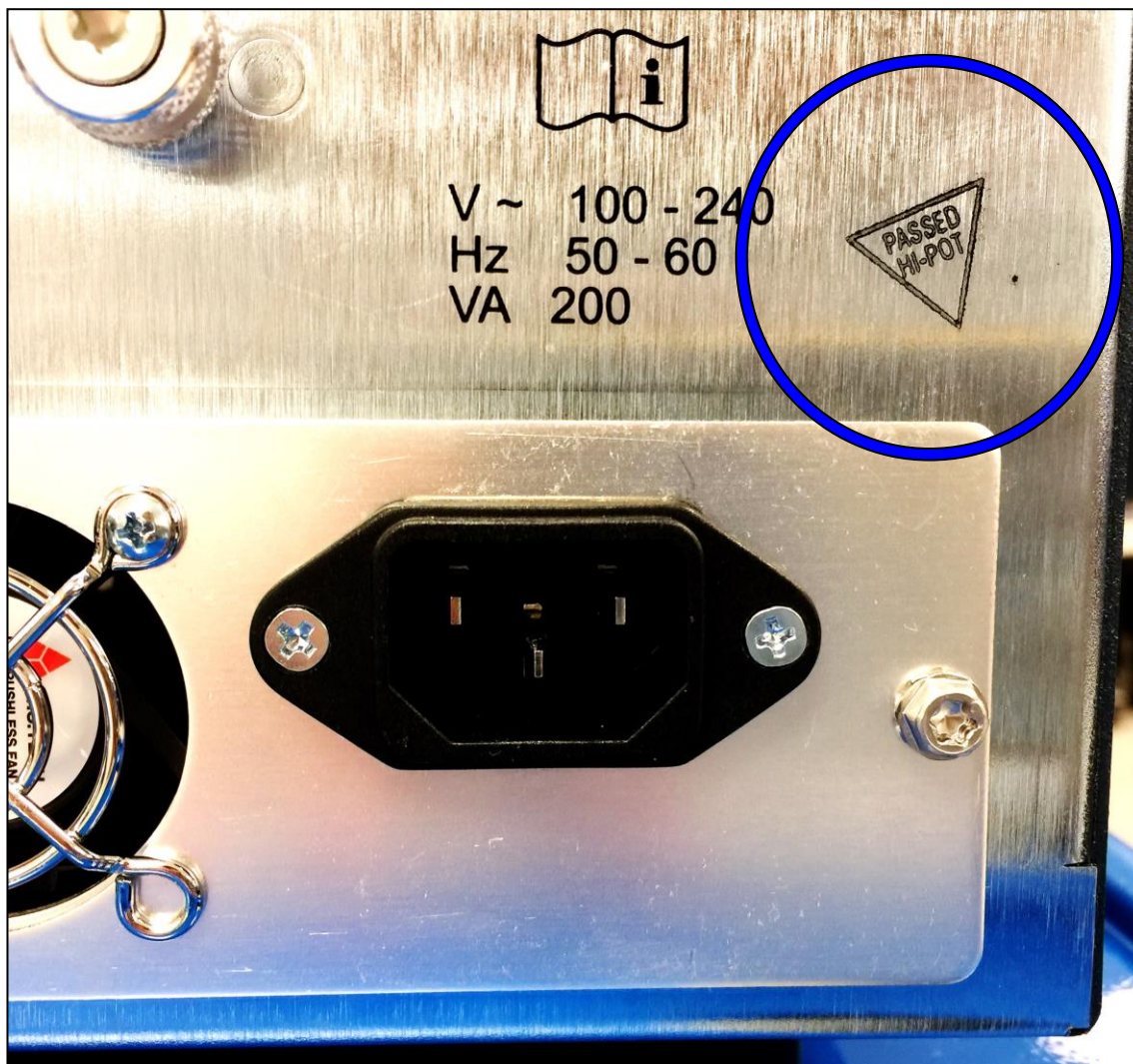


Electrostatic

OPER OPERATION DESCRIPTION
17.0 HI-POT TEST

17.1 Referencing procedures 735003612 and WAT046538, perform the Hi-Pot Electrical Safety Test.

Stamp unit near the Power Inlet when test has passed.



OPER 18.0 OPERATION DESCRIPTION
COMPLETE DHR FOLDER

ITEM	QTY	PART #	DESCRIPTION
1	1	N/A	Genealogy Record



18.1 Print a copy of the Genealogy Record from SigmaQuest.

Sign and Date the Genealogy Record.

Place the Genealogy Record into the DHR Folder

18.2 **Ensure all DHR contents are filled out properly.**

18.3 Place the Folder with the Pump.

Genealogy Hierarchy

G15VQS157N
Default | 186017000

No parent

- G15VQS157N, (Default|186017000)
 - 0197A044, (Default|289010197)
 - Jun 13 2015, (Default|405006780)
 - 050615487C, (Default|210000520)
 - 090615016C, (Default|210000345)
 - 090615224C, (Default|210000396)
 - 209220, (Default|279003151)
 - 209252, (Default|279003151)
 - M5AB6N, (Default|279003388)
 - M5AB6R, (Default|279003388)
 - P175, (Default|279003338)
 - T1570810031, (Default|279002268)

G15VQS157N Properties

Product Family: Default
Part Number: 186017000

Current Timestamp
2015-08-12T10:35:33-04:00

Assembly Process Steps
Build 186017000 ACQUITY QSM-R
No Attributes

History
2015-08-12T10:35:33-04:00

Signature and Date
12 AUG. 15

18.1



Verify



Scan



Torque



Critical Clean



Electrostatic