SI-200-GIST

DART AB Sciex Interface Manual
User Manual

Manual Revision 2
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Scope of Delivery:

This chapter lists the components of the ABI Sciex Interface.

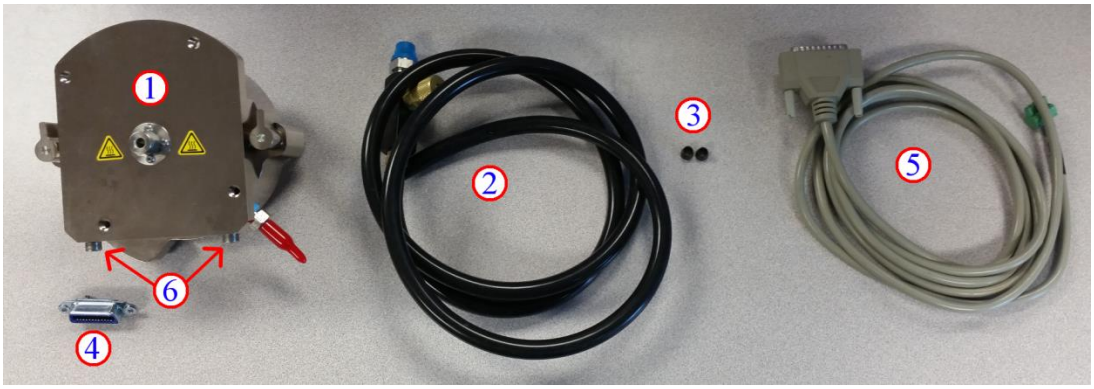

Figure 1: *Scope of Delivery*

Standard System Components

1. SI-200-A-R — ABI Sciex Flange Assembly
2. SI-999-14 — VAPUR Pump Kit – 1/4”
3. JG10019 — Graphite Vespel Ferrule
4. SI-200-INT-5500 — Sciex Interlock Plug (installed on SI-200-A-R)
5. SI-200-CC-A — Sciex Contact Closure Cable
6. SHSH_SS188_M6_12mm — M6 x 12 Socket Cap Screws

Configuration Dependent Components

1. Varies* — Ceramic Tubes
2. JVLC-ACCUTOF-A — PLATE, SUPPORT, YOKE, ACCUTOF ASSEMBLY**

***NOTE:** *See VAPUR Interface_Ceramic Tubes Reference Sheet 7.5.038 for ceramic tube lengths (available on ionsense.com).*

****NOTE:** *Only for 3200, 4000 and 5000 Models.*

Functional Description

The ABI Sciex Interface transfers the ions created by the DART source to the mass spectrometer and allows the DART source to mount on the mass spectrometer.

Safety

Caution: The surface of the flange can get hot.

Installation

Preparing the Source Region

First, before installing the DART interface, place the Sciex Instrument in '**Standby**' mode.

Then, carefully remove all gas and electrical connections from the AB Sciex APCI source and remove the source from the instrument.

The source area should look like the one in the figure below. Carefully remove the cover plate and set that aside. ***Caution: the cover plate may be very hot.***

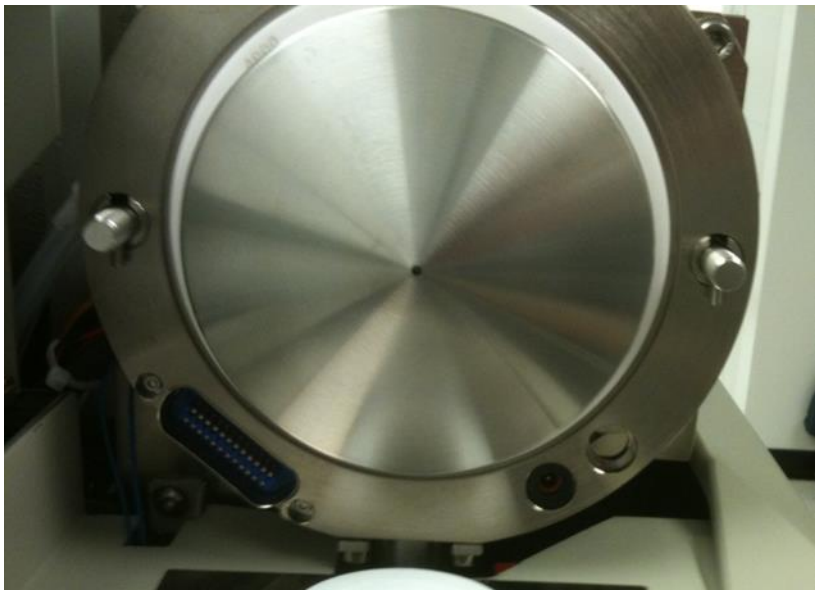

***Figure 2**: AB Sciex Source Region*

Once the AB Sciex source and cover plate are removed, the DART flange can be installed.

Attaching the Vapur Interface

Check that the set screw on the back of the flange is completely inserted into the flange.

***Figure 3**: Set Screw*

Orientate the interface so that the turning rods (circled in red in the picture below) line up with the keyholes on either side of the source region. The interlock plug should also line up.

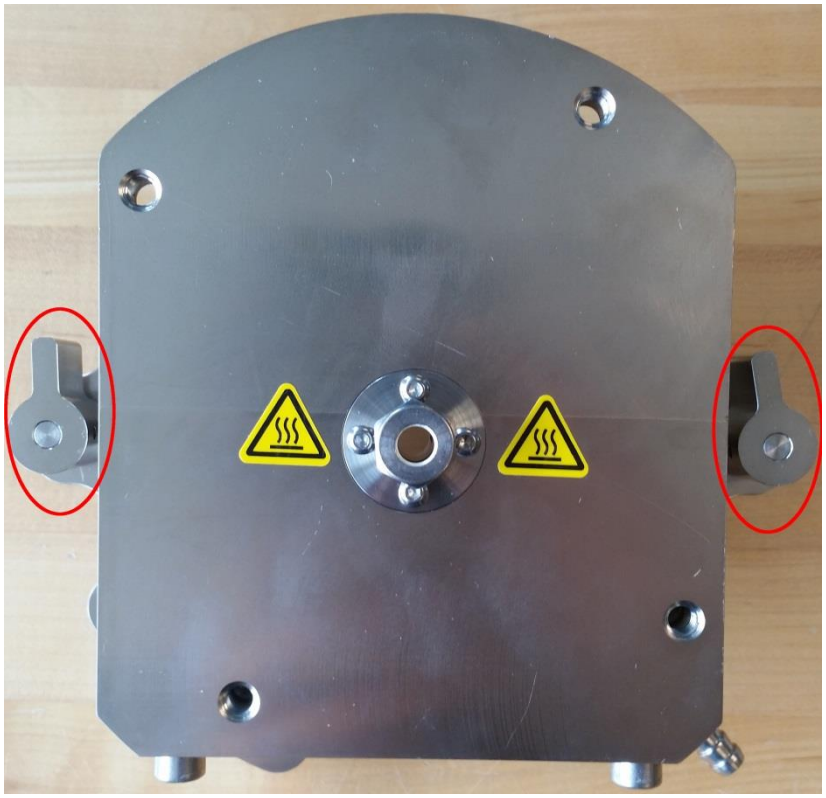

***Figure 4**: Turning Rods*

Next gently place the interface over the source region and turn the handles downward locking the interface in place.

***Figure 5**: Installed Interface*

Inserting the Ceramic Ion Transfer Tube into the Vapur Interface

Remove the Swagelok nut from the front of the Vapur interface and insert the ceramic ion transfer tube. Secure the ceramic tube with one of the provided graphite Vespel ferrules making sure to set a **2 mm** gap between the tube and the APC Inlet.

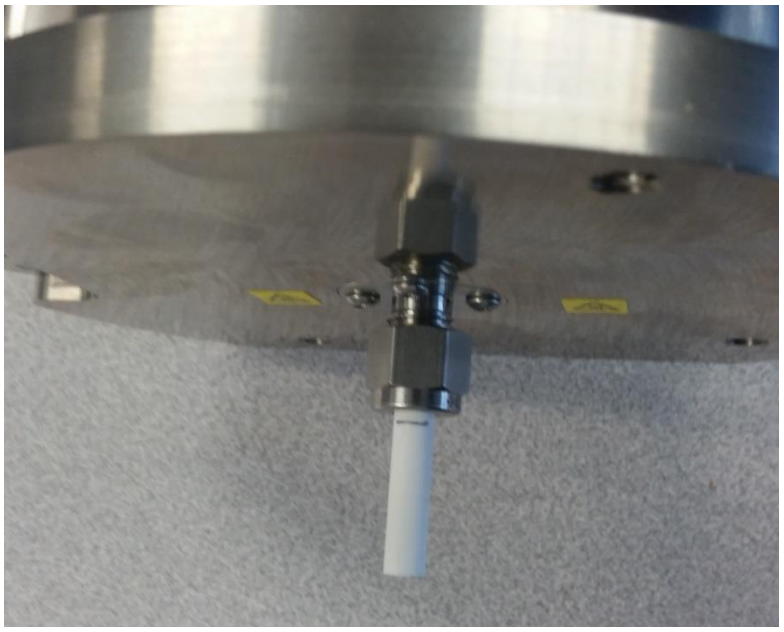

***Figure 6**: Ceramic ion transfer tube*

NOTE: *To easily set the 2 mm gap, push the ceramic tube against the Sciex inlet, secure the Swagelok fitting with ferrule and then mark the tube with a pencil. Pull the tube out as shown in Image 3 above so that a 2 mm gap is created inside the interface.*

Attach the black rubber pumping line from the diaphragm pump over the barbed pumping port fitting on the side of the Vapur interface.

***Figure 7**: Pumping Port*

Attaching the DART SVP source to the Vapur Interface

Attach the base of the source directly to the bottom of the flange with the two M6 x 12 mm socket cap screws provided with the flange.

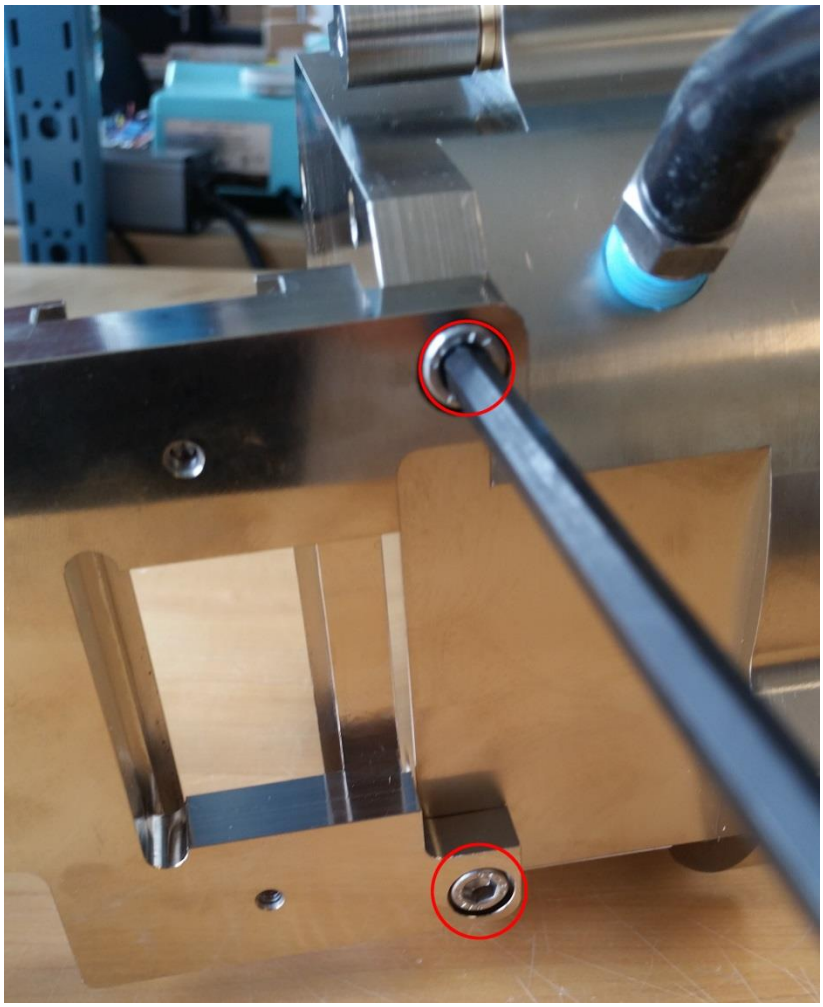

***Figure 8**: Attaching the source to the interface*

Attaching the Mounting Ring (3200, 4000, 5000 only)

Sicex 3200, 4000, 5000 models require a mounting ring before the DART SVP source can be installed.

***Figure 9**: Mounting Ring*

Install the two alignment screws into the top right and bottom left holes on the flange piece.

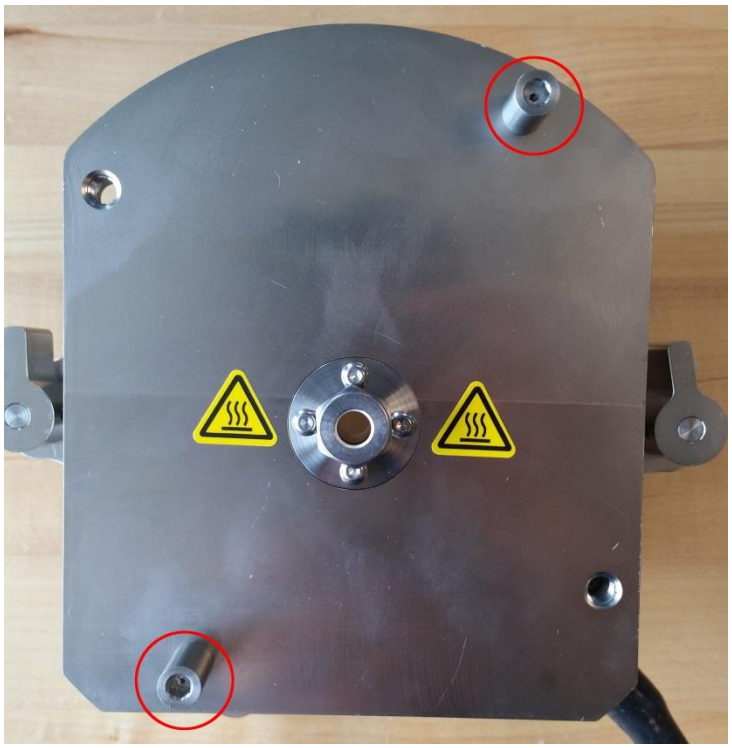

***Figure 10**: Alignment Pins*

Use the two M6 x 12 mm socket cap screws to attach the base of the source to the mounting ring.

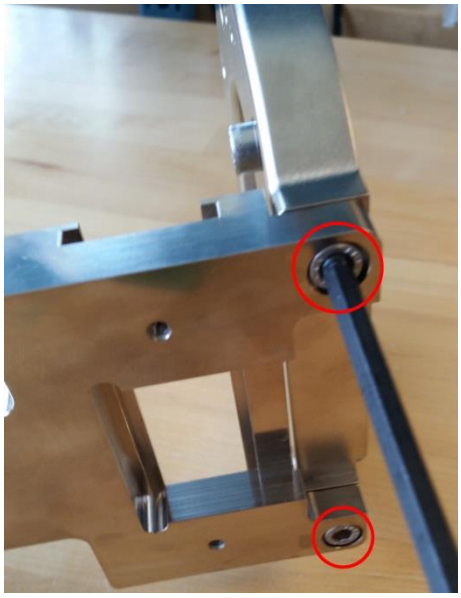

***Figure 11**: Attaching the source to the mounting ring*

Slide the mounting ring over the alignment holes and tighten the captive screws on the mounting ring.

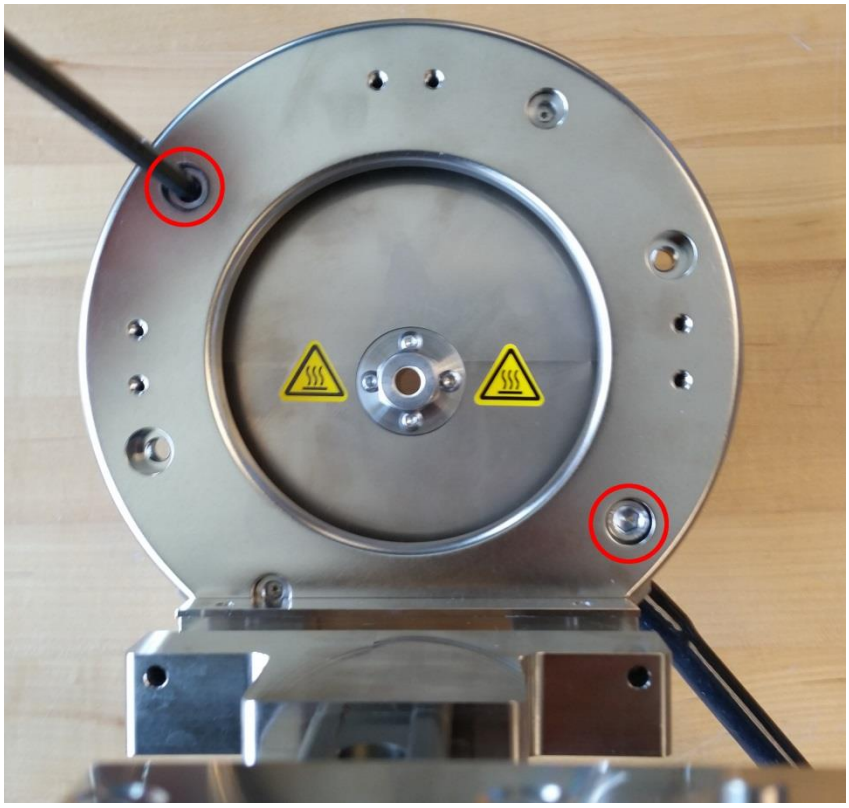

Figure 12: Attaching the mounting ring to the interface

Operation

Recommended Operating Parameters

Ion Source: Turbo Spray

Curtain Gas (CUR): 10.0
Collision Gas (CAD): ~ 7 (dependent on MRM tune)
IonSpray Voltage (IS) 0.0
Temperature (TEM) 0.0
Ion Source Gas 1 (GS 1) 0.0
Ion Source Gas 2 (GS 2) 0.0
Interface Heater: ON

Suggested Ranges for the “Compounds” Tab (compound-specific):

Declustering Potential (DP): 0-200 V
Entrance Potential (EP): 1-12 V
Collision Energy (CE): 5-130 V
Collision Cell Exit Potential (CXP): 0-58 V

Resolution Q1: Unit
Resolution Q3: Unit

Troubleshooting

Issue	Solution
Pressure is too high.	1. Check the vapur pump settings. See the DART Vapur Pump Optimization Protocol 7.5.052 for details (available on ionsense.com). 2. Check the ceramic tube spacing to ensure a 2 mm gap. See page 8 for further details.

Maintenance

No special maintenance is required for the ABI Sciex Interface.

Replacement Parts

SI-999-14	VAPUR Pump Kit - 1/4"
JG10019	Graphite Vespel Ferrule
SI-200-CC-A	Sciex Contact Closure Cable
SI-9xxx-47*	Ceramic Tubes

***NOTE:** *See VAPUR Interface_Ceramic Tubes Reference Sheet 7.5.038 for ceramic tube lengths (available on ionsense.com).*

Revision History

Template Revision: 1

Revision History			
REV	DCR #	Description of Change	Effective Date
1	43	Initial Release	11/11/2013
2	221	Updated to new format (User Manual Template_Rev1_7.5.111). Deleted models on page 1. Updated copyright page. Deleted disclaimer sentence above table of contents. Deleted pumping requirements. Deleted and re-wrote pages 5-8 with new pictures.	7/2/2015