



Please beware that this protocol is only a guide for the maintenance of your adapter. Only trained specialists may take care of such works. Any claims for damages caused by maintenance works by unauthorized personnel or employees which do not work for ATX shall be void.

We are pleased to offer you an individual training for the maintenance of your adapter.

Customer: _____

Contact person: _____

Service employee: _____

Adapter know-how: _____

Maintenance after: _____ Hubs Date: _____

1. The following components must be checked and repaired/exchanged, if required.

	o.k	n.o.k
1.1 Check spring contact probes for damages or dirt	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Spring contact probes must be placed centered to the hole in the moving plate	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Test the diameter of the guide pins and check on bending	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Ensure that the spring probes are well-seated	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Ensure that there is no play in the guides of the moving plate	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Check that hinges / joints / screw connection are well-seated	<input type="checkbox"/>	<input type="checkbox"/>
1.7 Check printed circuit boards bearings and hold-down devices for availability, height and damages	<input type="checkbox"/>	<input type="checkbox"/>
1.8 Check that thrust springs in the vacuum chamber are well-seated	<input type="checkbox"/>	<input type="checkbox"/>
1.9 Check the mechanical wear and tightness of the sealing - if required, clean (not with alcohol) - is there any spare sealing available?	<input type="checkbox"/>	<input type="checkbox"/>
1.10 Check sealing and tightness of adapter window sealing	<input type="checkbox"/>	<input type="checkbox"/>
1.11 Check adapter interface contact for cleanliness and wear	<input type="checkbox"/>	<input type="checkbox"/>
1.12 Check adapter interface for damages and foreign substances	<input type="checkbox"/>	<input type="checkbox"/>
1.13 Check for too much play in the interface bearing on the tester	<input type="checkbox"/>	<input type="checkbox"/>
1.14 Check the strength and correctness of the pinhead forms.	<input type="checkbox"/>	<input type="checkbox"/>
1.15 Check the "availability" of the distance plates in the vacuum chamber	<input type="checkbox"/>	<input type="checkbox"/>

If it is not ok, it is required that this is stated on the reverse side



2. In adapters with hold-down mechanics, vacuum hoods and bilateral adaptations also the following is tested:

- | | | | |
|-----|---|--------------------------|--------------------------|
| 2.1 | Check the mechanical wear and tightness of the packing cord in the vacuum hood | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.2 | Check the tight seating, deformation and height of the hold-down finger | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3 | Check gas spring for density and bearing strength / spherical head protection available | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.4 | Check the tight seating and function of the hinge | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.5 | Check the transfer interface for contact safety and damages | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.6 | Check the tolerance for the top contacting of the guide pins and guide bushes | <input type="checkbox"/> | <input type="checkbox"/> |

3. For adapters with Opens test, also test

- | | | | |
|-----|---|--------------------------|--------------------------|
| 3.1 | Sensor for moveability, position and damages (isolating layer available?) | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.2 | Check the transfer interface for contact safety and damages | <input type="checkbox"/> | <input type="checkbox"/> |

4. For bi-level adapters also check for

- | | | | |
|-----|--|--------------------------|--------------------------|
| 4.1 | the smooth running of the grid | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.2 | Available distances and tight seating | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.3 | Tight seating of the eccentric and the drive pin | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.4 | Observe the needle length when needles are exchanged | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.5 | Check the actuator grid slot for wear | <input type="checkbox"/> | <input type="checkbox"/> |

5. For adapters with pneumatic components also check:

- | | | | |
|-----|-------------------------------------|--------------------------|--------------------------|
| 5.1 | Function/tightness of the system | <input type="checkbox"/> | <input type="checkbox"/> |
| 5.2 | Check the drives for wear | <input type="checkbox"/> | <input type="checkbox"/> |
| 5.3 | Check the positioning (drive units) | <input type="checkbox"/> | <input type="checkbox"/> |

6. Exchange of needles

No general recommendation can be pronounced for the needle exchange, due to the severe impact that may caused by the most distinct circumstances (batch quality, needle hubs, vacuum adapters, mechanical adapters etc).

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Fundamentally, two versions for solving this issue have been developed:

- 6.1 Regular exchange intervals with individual hub numbers - only implemented in the manufacturing of high quantities
- 6.2 Exchange of single needles with contact issues - only implemented for small quantities

Please enter the needle material in a separate material list

7. Cleaning

- 7.1 Clean the adapter. Do not clean the plexiglas with aggressive products (never ethyl alcohol)

8. Final test

- 8.1 Contact test with short-circuit plate (if available)
- 8.2 Short-circuit test with LP-dummy (if available)
- 8.3 The adapter contact is tested on the tester with a sample from the series
- 8.4 Perform a hit pattern with an occlusive spray

The adapter is cleaned according to the above-mentioned items and can be fully implemented.

The adapter requires rework:
