



# SERVICE OPTIONS

## AERODYNAMIC PARTICLE SIZER (APS) 3321

TSI service, performed on an annual basis, helps to keep your APS 3321 in proper working order. TSI offers two levels of service: **Clean and Calibrate**, and **Repair, Clean and Calibrate**. Read below to learn what is included in each service.



### Clean and Calibrate Service includes:

<b>Maintain</b>	<ul style="list-style-type: none"><li>+ Clean outer and inner nozzles in a sonicating bath</li><li>+ Confirm all internal hardware is present and firmly attached, cable installation, fan operation, proper voltages at various points on main board</li><li>+ Grease o-ring on inner nozzle to protect against leaks</li><li>+ Align detector. If needed, align laser to ensure optimal particle detection by the double-crest optical system</li><li>+ Calibrate internal pressure sensor, adjust pump voltages to design values and measure/adjust four volumetric flow rates</li></ul>
<b>Replace</b>	<b>Parts</b> <ul style="list-style-type: none"><li>+ Replace internal filters, tubing, and o-rings as necessary</li></ul>
<b>Test</b>	<ul style="list-style-type: none"><li>+ Zero check: confirm the instrument measures 0 particles when drawing a sample through a HEPA filter</li><li>+ Measure counting efficiency at designated particle sizes (<math>&lt; 1 \mu\text{m}</math>), calibrate aerodynamic sizing at designated particle sizes (0.5 to <math>20 \mu\text{m}</math>) using PSL spheres</li><li>+ Write final calibration curve to instrument</li><li>+ Final test: verify/confirm aerodynamic sizing accuracy at selected particle sizes</li></ul>
<b>Does NOT Include</b>	<b>Broken Parts</b> <ul style="list-style-type: none"><li>+ Pump, display, laser diode</li></ul>
	<b>Physical Damage</b> <ul style="list-style-type: none"><li>+ Scratches, dents, or stains on the outer case</li></ul>

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### Repair, Clean and Calibrate includes:

<b>Repair</b>	+ Repair or replace broken parts (e.g. pump, display, laser)
<b>Clean and Calibrate</b>	+ All actions in a standard 'Clean and Calibrate' service are then performed
<b>Does NOT Include</b>	+ Scratches, dents, or stains on the outer case

## WHAT MAKES TSI SERVICE VALUABLE?

As a result of TSI service, you are returned an optimally performing and updated instrument. The service is performed by TSI's experienced technicians for a fixed price. This simple service allows you to stay focused on the work that is important to you. The aerodynamic sizing accuracy of TSI's 3321 APS is verified with NIST traceable PSL spheres.

TSI is registered to ISO-9001:2015.

### REQUEST SERVICE

#### Specify

CL-3321

RP-3321

#### Description

Clean and Calibrate

Repair, Clean and Calibrate

Call, or visit

[tsi.com/requestservice](http://tsi.com/requestservice)



UNDERSTANDING, ACCELERATED

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