



# SERVICE OPTIONS

## ENGINE EXHAUST PARTICLE SIZER<sup>(TM)</sup> (EEPS<sup>(TM)</sup>) SPECTROMETER 3090

TSI service, performed on an annual basis, helps to keep your EEPS 3090 spectrometer 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>	+ Clean column, charger, and inlet cyclone
<b>Replace</b>	<b>Parts</b> + Provide free updates as needed on instrument parts that may have changed since original manufacturing date to improve product quality + Replace internal filters, tubing, and charger needles
	<b>Firmware</b> + Ensure that all available firmware updates are installed
<b>Test</b>	<b>Flows</b> + Check for leaks, check/calibrate inlet and outlet flows, check and adjust charger flow
	<b>Electrical</b> + Check functionality of analog inputs, outputs, and trigger + Check pump voltages, column heater, and electrometers + Check and adjust column voltages to ensure sizing accuracy
	<b>Sizing and Concentration</b> + Check total concentration vs. a Reference CPC + Confirm EEPS' sizing and number concentration accuracy, vs. a Reference SMPS, using both polydisperse and monodisperse test aerosols
<b>Does NOT Include</b>	<b>Broken Parts</b> + Pumps, electrical boards, display, etc. <i>(In such cases, consider 'Repair, Clean and Calibrate' service)</i>
	<b>Physical Damage</b> + Physical damage to frame or housing

# SERVICE OPTIONS



## ENGINE EXHAUST PARTICLE SIZER<sup>(TM)</sup> (EEPS<sup>(TM)</sup>) SPECTROMETER 3090

### Repair, Clean and Calibrate includes:

<b>Repair</b>	+ Repair or replace broken parts (e.g. extraction pump, display)
<b>Clean and Calibrate</b>	+ All actions in a standard 'Clean and Calibrate' service are then performed
<b>Does NOT Include</b>	+ Physical damage to frame or housing

## 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 process allows you to stay focused on the work that is important to you. TSI EEPS calibration is traceable to National Standards and Metrology Institutes (NIST and NPL UK) and other accepted values of physical constants. TSI is registered to ISO-9001:2015.

These TSI services come with a 90-day warranty on labor performed, or parts used, during the service.

### REQUEST SERVICE

Specify	Description
CL-3090	Clean and Calibrate
RP-3090	Repair, Clean and Calibrate

Call, or visit  
[tsi.com/requestservice](https://www.tsi.com/requestservice)



UNDERSTANDING, ACCELERATED

**TSI Incorporated** - Visit our website [www.tsi.com](https://www.tsi.com) for more information.

**USA** Tel: +1 800 874 2811  
**UK** Tel: +44 149 4 459200  
**France** Tel: +33 1 41 19 21 99  
**Germany** Tel: +49 241 523030

**India** Tel: +91 80 67877200  
**China** Tel: +86 10 8219 7688  
**Singapore** Tel: +65 6595 6388