

# ThermoFisher

## SCIENTIFIC

Title: TSQ ISQ Series MS Preventive Maintenance  
Checklist

Number: ULS-DRS-PMC-0306

Revision: 001

**It is ultimately the responsibility of the Service Representatives to confirm this document is current prior to use. After 90 days, this copy is not to be used unless confirmed that it has not been superseded, or otherwise gaining written approval (pre-approval form or email) from the customer that this document remains suitable for execution.**

Effective Date: 10 Mar 2021



Company:				Equipment Manufacturer:			
Customer Contact Name:				Model:			
Engineer Name:				Serial #:			
SAP Notification/Job #:				System Reference ID:			
Procedure(s) utilized:				Decontamination:		<input type="checkbox"/> Yes <input type="checkbox"/> Not required	
				Date Performed:			

Initial Checks by Customer		Yes	No	System Check		Record Value(s)		
Are all data on storage devices archived?		<input type="radio"/>	<input type="radio"/>	Computer				
Is there an up to date calibration mixture available from the customer?		<input type="radio"/>	<input type="radio"/>	Operating System				
Initial Checks by Field Service Engineer		Yes	No	Software Version				
				Software Version				
Check Operation of cooling fans		<input type="radio"/>	<input type="radio"/>	Firmware Version				
Check Air/Water spectrum		<input type="radio"/>	<input type="radio"/>	<div>Component Checks</div> <div>Yes</div> <div>No</div>				
Check chemical background – column at 50° C and 250° C (or max column temperature if lower)		<input type="radio"/>	<input type="radio"/>					
Run full diagnostics to identify areas of concern		<input type="radio"/>	<input type="radio"/>	Optional Spare Parts (CHARGEABLE)	Check O-Rings and replace as required		<input type="radio"/>	<input type="radio"/>
Check Detector voltage		<input type="radio"/>	<input type="radio"/>		Clean optional dust filters		<input type="radio"/>	<input type="radio"/>
Shutdown system		<input type="radio"/>	<input type="radio"/>		Check and adjust ball valve position at open/closed as required (if applicable)		<input type="radio"/>	<input type="radio"/>
Add FC 43 compound (75 uL)		<input type="radio"/>	<input type="radio"/>		Check handle function and VPI (if installed)		<input type="radio"/>	<input type="radio"/>
Remove the dust from boards and fan		<input type="radio"/>	<input type="radio"/>		Check and tighten screws on heaters		<input type="radio"/>	<input type="radio"/>
Check and clean the detector assembly if noisy i.e. diagnostic failure		<input type="radio"/>	<input type="radio"/>		Check lens plate and springs, replace as required		<input type="radio"/>	<input type="radio"/>
Data System		Yes	No		Check PCBs and remove dust		<input type="radio"/>	<input type="radio"/>
Checked operation of all cooling fans		<input type="radio"/>	<input type="radio"/>		Clean Intake filters		<input type="radio"/>	<input type="radio"/>
Checked operation of disk drive and hard disk		<input type="radio"/>	<input type="radio"/>		Check all fans		<input type="radio"/>	<input type="radio"/>
Apply any software updates if available		<input type="radio"/>	<input type="radio"/>		Replace Multiplier if voltage >2000V		<input type="radio"/>	<input type="radio"/>
Checked operation of printer (print test page)		<input type="radio"/>	<input type="radio"/>	Replace oil mist filter (if installed)		<input type="radio"/>	<input type="radio"/>	
Component Checks		Yes	No	<div>Parts INCLUDED in PM</div> <div>Remove and clean ion source cartridge</div> <div>Replace Repeller spring washer</div> <div>Replace Filament</div> <div>Replace Forepump Oil</div> <div>Replace in line gas filter</div> <div>Replace Source Plug O-Ring (ISQ 7000 and TSQ 9000 only).</div>				
Remove and clean ion source cartridge		<input type="radio"/>	<input type="radio"/>					
Replace Repeller spring washer		<input type="radio"/>	<input type="radio"/>					
Replace Filament		<input type="radio"/>	<input type="radio"/>					
Replace Forepump Oil		<input type="radio"/>	<input type="radio"/>					
Replace in line gas filter		<input type="radio"/>	<input type="radio"/>					
Replace Source Plug O-Ring (ISQ 7000 and TSQ 9000 only).		<input type="radio"/>	<input type="radio"/>					

Functional Tests		yes	No	Final Test		Yes	No
Start system and verify communication		<input type="radio"/>	<input type="radio"/>	Run standard/customers sensitivity standard and check results Or Run Installation Test Sample (OFN) to check system sensitivity		<input type="radio"/>	<input type="radio"/>
Update firmware as required/allowed for MS/GC/AS		<input type="radio"/>	<input type="radio"/>				
Allow to pump down to less than 80 mTorr or at least 2 hours.		<input type="radio"/>	<input type="radio"/>				
Check operation of cooling fans		<input type="radio"/>	<input type="radio"/>				
Check source exchange tool insertion and removal (if applicable)		<input type="radio"/>	<input type="radio"/>				
Check Vacuum pump noise level and temperature		<input type="radio"/>	<input type="radio"/>				
Check air/water background		<input type="radio"/>	<input type="radio"/>				
Check background and FC43 response (50-650 u)		<input type="radio"/>	<input type="radio"/>				
Run full diagnostics and verify all diagnostic pass		<input type="radio"/>	<input type="radio"/>				
Run appropriate built in tunes and compare to previous tune results. TSQ Series-EI Initial Tune and EI SRM/Standard tune TSQ AEI Full Tune ISQ Series-EI Default Tune and EI Full Autotune ISQ AEI Full Tune		<input type="radio"/>	<input type="radio"/>				
<b>Measurement &amp; Test Equipment</b>							
Calibration Date:		Next Due Date:		Make/Model:		Identification #:	
Comments:							
<b>Field Service Representative Signature:</b>				<b>Customer Signature:</b>			
Date: <input type="text"/> <i>Date not required if using Digital Signature</i>				Date: <input type="text"/> <i>Date not required if using Digital Signature</i>			