



Agilent Technologies Inc.
 2850 Centerville Road
 Wilmington DE 19808-1610
 United States

Tel: 800 227 9770 Option 3, 1 7648#
 Fax: 1-302-993-5963
 Email: soclosurerequest@agilent.com
 Website: www.agilent.com/chem

Customer Contact:

Houston Forensic Science Center Inc
 500 Jefferson St Fl 13
 HOUSTON TX 77002-7300
 USA

TAX ID :

Brooke Mendenhall
 bmendenhall@hfsctx.gov
 832-975-1217

Invoice To:

Houston Forensic Science Center Inc
 500 Jefferson St Fl 13
 HOUSTON TX 77002-7300
 USA

SERVICE REPORT

Customer Purchase Order Number: N/A -BAM 5/19/2022	Customer Number: 70449002
Service Request: N/A -BAM 5/19/2022	Service Request Date: 5/5/2022 -BAM 5/19/2022
Service Order: 6005346430	Service Confirmation: 6904219415

Delivery Site:

Houston Forensic Science Center Inc
 500 Jefferson St Fl 13
 HOUSTON TX 77002-7300
 USA

Direct Inquiries to:

Contact Name: Customer Contact Center
 Contact E-mail: soclosurerequest@agilent.com
 Contact Telephone: 800 227 9770 Option 3, 1 7648#
 Contact Fax: 1-302-993-5963

Location:

Room
Bldg
Lab
Dept

products | applications | software | services

Learn more about Agilent's Special Offers, Products, Services and our full range of laboratory productivity solutions optimized for your applications and workflows. Visit us at www.agilent.com/chem

Agilent Technologies Inc
 5301 Stevens Creek Blvd
 Santa Clara CA 95051
 United States

Federal Tax ID: 77-0518772

Beneficiary Bank: Bank of America
 SWIFT: BOFAUS3N
 Beneficiary Account: 12331-31561
 Beneficiary Name: Agilent Technologies Inc

ORIGINAL

Service Instrument:


Model Number	Model Description	Serial Number	System Handle	Parent Asset
SYS-GC-7890-E	GC 7890 System Enhanced GC Features		1	
G4556-64014	111 Vial Model Tray	HT15100002	1	SYS-GC-7890-E
G4557A	7697A Headspace Sampler, 111 Vial	CN15070059	1	SYS-GC-7890-E
G3440B	Agilent 7890B Series GC Custom	CN15123149	1	SYS-GC-7890-E
G7318AA	7697A Headspace Control GC ChemStation	USH3395397	1	SYS-GC-7890-E

Service Items:

Item	Service/Part #	Description	Qty	Entitlement	Service Start	Service End
1000	PM	Preventive Maintenance	1.00	Agreement Entitlement - 100 % covered	05/12/2022	05/13/2022
1030	5200-0176	FID Jet, universal fit, 0.011 inch ID	2.00	Agreement Entitlement - 100 % covered		
1020	G4556-67011	7697A Standard PM Kit	1.00	Agreement Entitlement - 100 % covered		
1010	5188-6495	Split vent trap PM kit, single cartridge	2.00	Agreement Entitlement - 100 % covered		

Additional Information:

Service Information:

Problem Description: AUG 22,PM,SYS-GC-7890-E		
Service Provided: Performed PM per checklist		
Service Overview Code: Reason Code: Scheduled Service Diagnosis Code: Scheduled Service Resolution Code: Scheduled Service		
Reported Hours: 4.5	Travel Hours: 1.0	
Customer Field Service Representative Name: Rachel Allen	Customer Field Service Representative Signature: 	Date: 13 May 2022
Customer Name: Brooke Mendenhall	Customer Signature:	Date: 05/19/2022
Additional Comments:		

Instrument Maintenance

Select the appropriate service to be performed.

- Interim Preventive Maintenance (when available, is typically 6 months or at the request of the customer)
- Major Preventive Maintenance (Yearly)
- Enhanced Preventive Maintenance (when available, is provided "As needed")

System Information

- Check this box if an instrument configuration report is attached instead of completing the table.

Instrument System Name and ID	GCHS 2
Instrument System Site and Location	Houston Forensic Science Center

List System Component Product Numbers	List the Serial Numbers of each Component
1. See GC checklist	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	

Preparation

- ✓ Discuss any specific issues with the customer before starting.
- ✓ Review the instrument logbook for recorded problems and comments.
- ✓ Save instrument control settings before starting the procedure.
- ✓ Perform a general inspection of the system for cleanliness.
- ✓ Check for proper installation of parts, assemblies, sensors etc.
- ✓ Check system for required installation of components and implementation of Service Notes
- ✓ Check for required firmware updates and verify with customers if they would like them installed. Firmware update(s) are strongly recommended.

Preventive Maintenance Procedures

Service Not Applicable

Inspect and Clean Sampler

Service Not Applicable.

- If a tray is part of the system, remove the tray and pneumatics to allow for access to the oven.
- If a tray is part of the system, check that the shutter sensor is not dusty. If it is, use air duster to remove the dust.
- Check for any debris in the carousel and clean if necessary.
- If a tray is part of the system, reinstall the tray and pneumatics unit.
- Remove the front panel of the instrument.
- Check the carousel belt for wear. If it is worn, consult with the customer to determine if it should be replaced.
- Use a dry, clean cloth to wipe the lifter rod(s) clean. Do not apply any lubricant.
- Vacuum the inside of the unit.
- Reinstall the front panel of the instrument.
- Using the Manual Operations function under the Service Mode Key on the instrument keypad, confirm that the following components work:
 - Tray Lifter (If applicable)
 - Sampler Lifter
 - Carousel Motor
 - Shutter Motor (If applicable)

Pneumatic Components

Service Not Applicable.

- Remove the sample probe.
- Remove the sample loop.
- Install the new sample loop.
- Install the new sample probe.
- Remove the fused silica transfer line.
Special note: If OQ will be performed after the PM, remove the fused silica transfer line and do not reinstall it until the transfer line measurement is taken for the OR procedure.
- Reinstall the fused silica transfer line.

- Use Service Reminders under the Service Mode Key on the instrument keypad to run the instrument restriction and leak test. Verify that it passes (make a note below the tests results table). If it fails, consult the customer for repair options.

Tray Components

- Service Not Applicable.*
- Check for any debris in the sample trays and clean if necessary.
- Check that the tray gantry rod is clean. If it is dirty or dusty, wipe it clean with a dry cloth. Do not apply any kind of lubrication.
- Check that the sensors are not dusty. If they are, use air dusters to remove the dust.
- Check the tray belts for any wear. If they are worn, consult with the customer to determine if they should be replaced.
- Verify the three LED's for the tray racks light up when the trays are installed.
- Run the tray calibration.
- Reset the counter (pressing the OFF key) of the tray calibration.

Restore Instrument

- Service Not Applicable.*
- Connect the headspace transfer line if it has not been already reconnected.
- Return instrument to initial condition.
- Perform system checkout procedure or test.

Guidance

If the PM service is performed prior to a qualification service, then use the qualification procedure as a guide for final instrument set up and checkout.

Service Review

- Attach available reports/printouts of all tests to this documentation.
- Record the Preventive Maintenance service activity in the customer's records/logbook.
- Record the PM event in the Smart Alerts logbook, if applicable.
- Update/reset instrument maintenance counters as appropriate.
- Affix the PM sticker to the system or instrument logbook based on the customer's request.
- Complete the Service Engineer Comments section if there are additional comments.
- Review this service, parts replaced, and test results obtained with the customer.
- If the instrument firmware was updated, record the details of the change in the Service Engineer's Comments box. Systems in a compliant environment may need additional documentation.
- Complete the Signature Page with both Service Engineer and Customer signatures.**

7697A Headspace Sampler Test Results

Test Description	Expected Test Result	Actual Test Result
Tray Calibration	Pass	N/A
Leak Test	Pass	Pass
Chemical Checkout Test		

7697A Headspace Sampler Parts List

Part Description	Part Number	Product or Model# where used	Quantity consumed
7697A Standard PM Kit ¹	G4556-67011	7697A HS Sampler	1
Ferrule Flexi Inert 0.53 mm Col 10/PK NFS	G3188-27503	7697A HS Sampler AND G3520A module	1(Optional, not included in PM kit)

¹ Part numbers and descriptions for the kit contents

Part Description	Part Number	Quantity
Sample Probe	G4556-63825	1
Sample Loop (1mL)	G4556-80106	1
Thermal Gap Insulation Foam	G3530-00610	1
7697A Fused Silica and ProSteel Kit	G3903-61001	1
Polyimide, Valcon Ferrule, 5 pack	0100-2595	1
Nut and reducing union for 6 port valve transfer line connection	0100-2594	1
Liner, direct, 2mm ID, deactivated	5181-8818	1

Signature Page

Service Engineer Comments (optional)

If there are any specific points you wish to note as part of performing the installation or other items of interest for the customer, please write in this box.

Service Verification

Service Request Number:

6005346430

Service Engineer Name:

Rachel Allen

Service Engineer Signature:

Rachel Allen

Total number of pages in this document:

7

Date Service Completed:

5/12/2022

Customer Name:

Corissa Rodgers / Brooke Mendenhall

Customer Signature:

System Information

- Check this box if an instrument configuration report is attached instead of completing the table below.

Instrument System Name and ID	GCHS 2
Instrument System Site and Location	Houston Forensic Science Center

List System Component Product Numbers	List the Serial Numbers of each Component
1. 7890B - GC	CN15123149
2. 7697A - Headspace	CN15070059
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Preparation

- Discuss any specific issues with the customer before starting.
- Review the instrument logbook for recorded problems and comments.
- Save instrument control settings before starting the procedure.
- Perform a general inspection of the system for cleanliness.
- Check for proper installation of parts, assemblies, sensors etc.
- Check system for required installation of components, settings as defined by current Service Notes.
- Check for required firmware updates and verify with customers if they would like them installed.
- Before starting the following procedures, record the Detector Signal Output(s) in the results table. If the GC is turned OFF or in a service mode, comparing the detector outputs before and after the service is not possible.

Preventive Maintenance Procedure

Clean and inspect GC

- ☑ Unplug power cord from the power source.
- ☑ Open GC covers and vacuum/remove any dust/debris. Pay particular attention to cooling fans.
- ☑ Inspect internal connectors for proper contact and placement.
- ☑ Reconnect Power to the GC. Power the GC on and verify the power on self-test passed.
- ☑ Verify oven motor spins freely and turns on with the oven door closed; off when the door is opened.
- ☑ Verify operation of all other fans - the inlet and EPC cooling fans.
- ☑ Verify oven intake/outlet flap assembly is operating smoothly while heating and cooling the oven

Inlet and detector consumable replacement

- ☑ For the inlets installed, perform inlet maintenance as defined in the 7890 manual – “Maintaining Your GC” - for the inlet(s) installed.
- ☑ Replace the split vent trap cartridge filter on units with these inlets: Split/Splitless Capillary (SSL), Multi-Mode Inlet (MMI), Programmed Temperature Vaporizer (PTV), Volatiles Interface (VI).
- ☑ If the inlet system is used in Split Mode with viscous samples, inspect and clean the split vent tube on the inlet and flush or replace the tubing between the inlet and the split vent trap.
- ☑ If the GC includes a Flame Ionization Detector (FID), replace the jet. If the ignitor shows any buildup of sample or corrosion, replace the ignitor. Examine the FID collector and castle assemblies for contamination – clean as necessary.

Zero Sensors and Leak test

- ☑ Zero all pressure sensors per the procedure in the 7890 “Advanced User Guide”.
- ☑ Perform inlet pressure decay test(s) as defined in the 7890 “Troubleshooting Manual”.
If the PM is done in preparation for an Operational Qualification, then the pressure decay test defined within that protocol can be used for the PM.
- ☑ Record if test passed or failed in the results table.

ALS Maintenance

- Section NOT applicable**
- Check all cabling and configuration settings between GC, tray, and injectors.
- Vacuum or remove any dust, especially around fans.
- Check operation of all fans.
- Check syringe for smooth plunger operation.
- Check for smooth operation of the needle support – clean if necessary

Restore Instrument

- Restore the normal operating conditions or customer method using the Browser interface or Data System.
- Purge the system with carrier flow for 15 minutes
- Bake out the system, then restore the normal operating conditions
- After equilibration, check and record the post PM detector signal output values. Results should be similar or lower than the detector outputs recorded prior to PM.
- Perform a chemical checkout. If this is a routine PM, inject the customer's sample using the ALS if applicable. This will act as a final checkout of both the ALS and the GC.

Note: If the PM Service is performed prior to a qualification service, then use the qualification procedure as a guide for final instrument set up and checkout.

Signature Page

Service Review

- Attach available reports/printouts of all tests to this documentation.
- Record the Preventive Maintenance service activity in the customer's records/logbook.
- Update/reset instrument maintenance counters as appropriate.
- Affix the PM sticker to the system or instrument logbook based on the customer's request.
- Complete the Service Engineer Comments section if there are additional comments.
- Review with the customer this service, parts replaced, and test results obtained.
- If the instrument firmware was updated, record the details of the change in the Service Engineer's Comments box or if necessary, in the customer's IQ records.
- Supply the customer with a copy of the Smart Alerts flyer.
- Describe Smart Alerts to the customer.
- Install Smart Alerts if requested.

7890 GC Test Results Table

Detector Signal Outputs	Before PM Service	After PM Service
Front detector output	OFF	
Back detector output	OFF	
AUX detector output	OFF	
Pressure decay test	Expected test result	Actual test result
Front inlet pressure decay test	Pass	Pass
Back inlet pressure decay test	Pass	Pass

7890 Parts List Table

The following kits are recommended for capillary and purged packed inlets. If this is a general PM and the customer has a preferred set of consumables, you may use the customer's consumables.

Part description	Part number	Product or model# where used	Quantity consumed
SSL Capillary Inlet PM kit, Splitless	5188-6497	7890A/B	
SSL Capillary Inlet PM kit, split	5188-6496	7890A/B	
SSL Capillary Ultra Inert Inlet Gold Seal with Washer	5190-6144	7890A/B	
SSL Capillary Ultra Inert Inlet Splitless Liner - Single taper with Glass Wool	5190-2293	7890A/B	
SSL Capillary Ultra Inert Inlet Low Pressure Drop Split Liner - with Glass Wool	5190-2295	7890A/B	
PP Inlet PM kit	5188-6498	7890A/B	
Split vent trap PM kit, single cartridge (for MMI, PTV & VI)	5188-6495	7890A/B	
MMI Cleaning Kit	G3510-60820	7890A/B	
PTV Septumless Head Rebuild Kit	5182-9747	7890A/B	
PTV Septumless Head Teflon Guide	5182-9748	7890A/B	
Ignitor (glow plug) assembly with O-ring	19231-60680	7890A/B	
FID Collector Rebuild/Cleaning Kit	G1531-67000	7890A/B	
Standard .011-inch FID Jet for capillary FID base	G1531-80560	7890A/B	
High Temperature .018-inch FID Jet for capillary FID base	G1531-80620	7890A/B	
Standard .018-inch FID Jet for packed column with packed FID base	18710-20119	7890A/B	
Standard .011-inch FID Jet for capillary column with packed/adaptable FID base	19244-80560	7890A/B	
High Temperature .018-inch FID Jet for capillary column with packed/adaptable FID base	19244-80620	7890A/B	
NPD Jet, universal fit, .011-inch ID	G1534-80580	7890A/B	
NPD Jet, universal fit, .011-inch ID Extended tip	G1534-80590	7890A/B	
SSL Capillary Ultra Inert Inlet Gold Seal with Washer	5190-6144	7890A/B	
SSL Capillary Ultra Inert Inlet Splitless Liner - Single taper with Glass Wool	5190-2293	7890A/B	
**FID Collector Replacement Kit, if needed	G1531-67001	7890A/B	

Revision: 2.00, Issued: December 30, 2020

Agile Document Number: D0007063

DE number: 44166.7597222222

© Agilent Technologies, Inc. 2020

Service Engineer Comments

If there are any specific points you wish to note as part of performing the service or other items of interest for the customer, please write include them in this box.

Service Completion

Service request number 6005346430 Date service completed 5/12/2022

Agilent signature *Rachel Allen* Customer signature _____

Total number of pages in this document 6