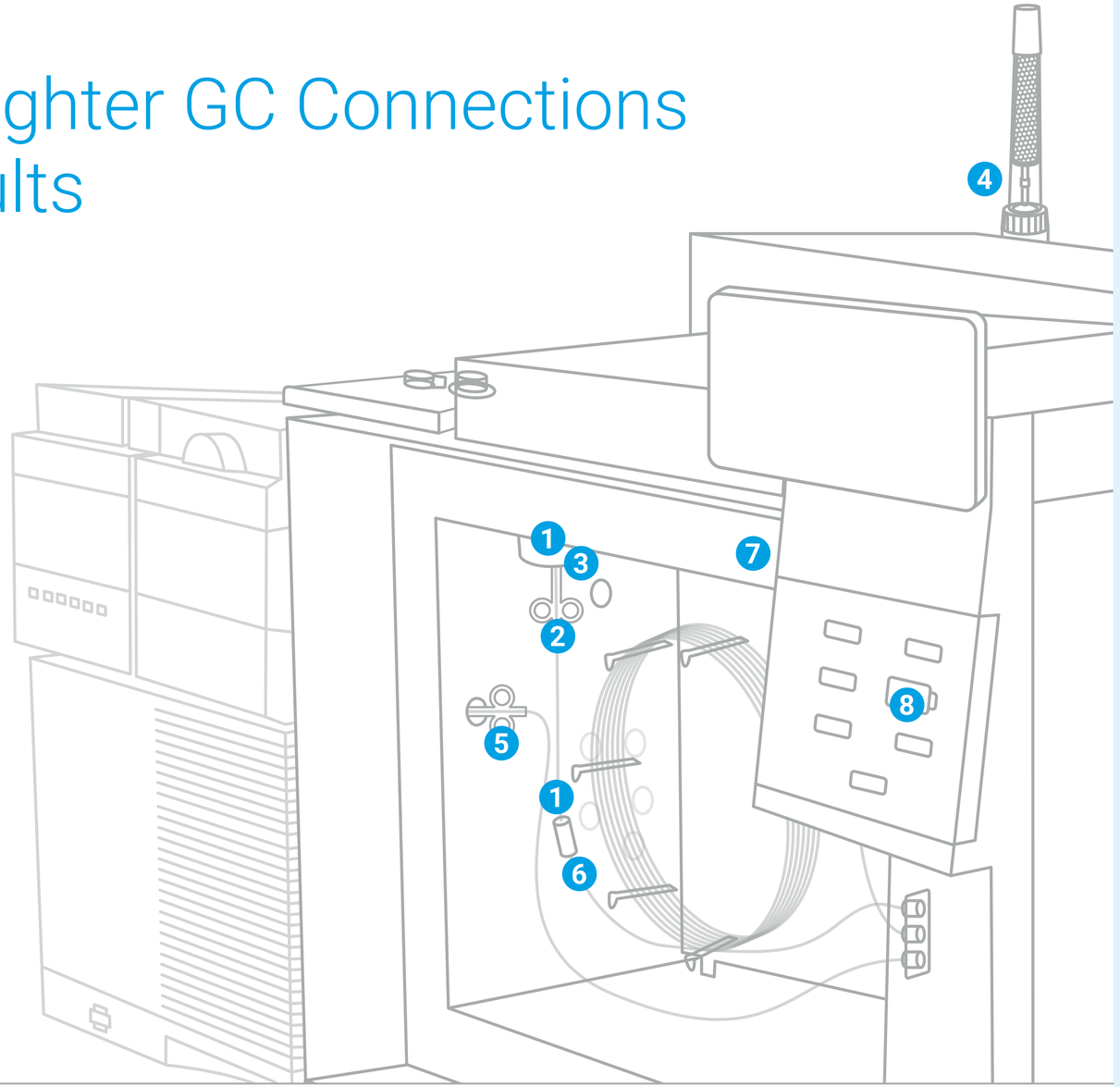
Eight Tips for Tighter GC Connections and Better Results

Inspecting your GC column connections is a key part of good preventive maintenance—and a laboratory practice that you simply *cannot* afford to overlook. That's because poor, leaky connections can cause:

- Noisy baselines
- Loss of expensive, high-quality gas
- Shorter column and detector life
- Decreased system sensitivity
- Reduced system productivity

This poster highlights critical GC connection "hotspots" to help you fix problems before they compromise your results.

Learn more about creating and maintaining leak-free GC connections.
www.agilent.com/chem/bettergcconnections



Agilent
CrossLab
From Insight to Outcome

1 Use supplies that are appropriate for your application

To ensure leak-free column connections to oxygen-sensitive detectors, such as MSD or ECD where graphite/polyimide ferrules are recommended, use **Agilent Self Tightening Winged column nuts**. If your application requires inertness, choose **Agilent UltiMetal Plus Flexible Metal ferrules** for flow path connections. Using CFT? Try our new **gold-plated Flexible Metal ferrules** for an easily installable connection that provides a leak-free seal.

Remember, too, that the right inlet liner can help maximize flow path inertness as well. The new **Agilent Ultra Inert glass-fritted liners** feature a filter frit instead of glass wool.

2 Don't overtighten fittings

Agilent Self Tightening Winged column nuts provide a leak-free connection without the need for wrenches. The unique locking collar holds your column in place for accurate installation depth and ferrule positioning.

The **Agilent Self Tightening Winged column nut** employs an innovative spring-drive piston to apply continuous pressure against the ferrule, maintaining a leak-free seal even after hundreds of injections without re-tightening.

3 Install the column at the correct height

The easy-to-use **Column Depth Guide** helps you maintain your column and ensures proper installation, regardless of application.

4 Remember, cleanliness matters

An **Agilent Gas Clean filter system** removes oxygen, moisture, or other contaminants that can alter your analysis. Plus, the **Agilent Gas Clean sensor** automatically alerts you when filters are saturated and need replacing.

Optimize cleanliness by using **Agilent UltiMetal Plus stainless steel tubing and fittings** for carrier gas lines and GC system plumbing.

When installing a column, wear gloves or limit your handling of supplies to reduce oils or contaminants on flow path parts.

5 Reduce and eliminate leaks at the MS interface

Agilent MS Interface Winged and Self Tightening Winged column nuts with graphite/polyimide ferrules ensure that your connections will last cycle after cycle.

Use a leak detector at all connections of the flow path to be certain that there are no leaks occurring throughout your system.

6 Select the proper supplies for more complex analysis

For example, the **Agilent Ultimate Union with UltiMetal Plus Flexible Metal ferrules** is a good choice for worry-free guard column/retention gap connections.

7 Choose a durable detector jet

New Agilent detector jets fit all GC platforms and simplify column installation and jet replacement—minimizing the chance of column damage.

Their sturdy construction reduces the risk of deforming, galling, and bending. Plus, they do not require thread lubricant, which can cause contamination.

8 Know the status of your GC capillary column

Agilent J&W column Smart Keys provide immediate identification and information on column use, configuration, age, temperature, and number of injections. Default parameters facilitate configuration.

Keep in mind that other factors affect the quality and consistency of your data

Agilent sample preparation products

Eliminate laboratory variability and ensure consistent flow, cleanliness, and recovery.

Agilent J&W GC columns

Depend on the sharpest peaks, the best inertness, and the tightest column-to-column reproducibility.

Agilent GC and GC/MS systems combined with OpenLab CDS and MassHunter software

Perform consistent chromatography and keep pace with stringent new methods and demanding sample loads.

Agilent Press Fits and guard columns

Extend the lifetime of your column by using deactivated tubing and connectors.

Agilent CrossLab CS Electronic Leak Detector and ADM Flow Meter

The Agilent CrossLab Cartridge System (CS) design is unique to the market. It combines the two most critical GC flow path monitoring tasks into a single hand-held system.

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