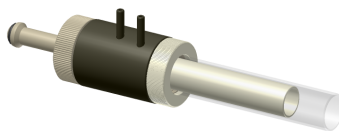


D-Torch* for Spectro Radial Part Number 30-808-2928



BEFORE YOU START

Congratulations on the purchase of your D-Torch.

As supplied, the D-Torch is fully assembled. Table 1, lists the D-Torch parts that can be ordered separately.

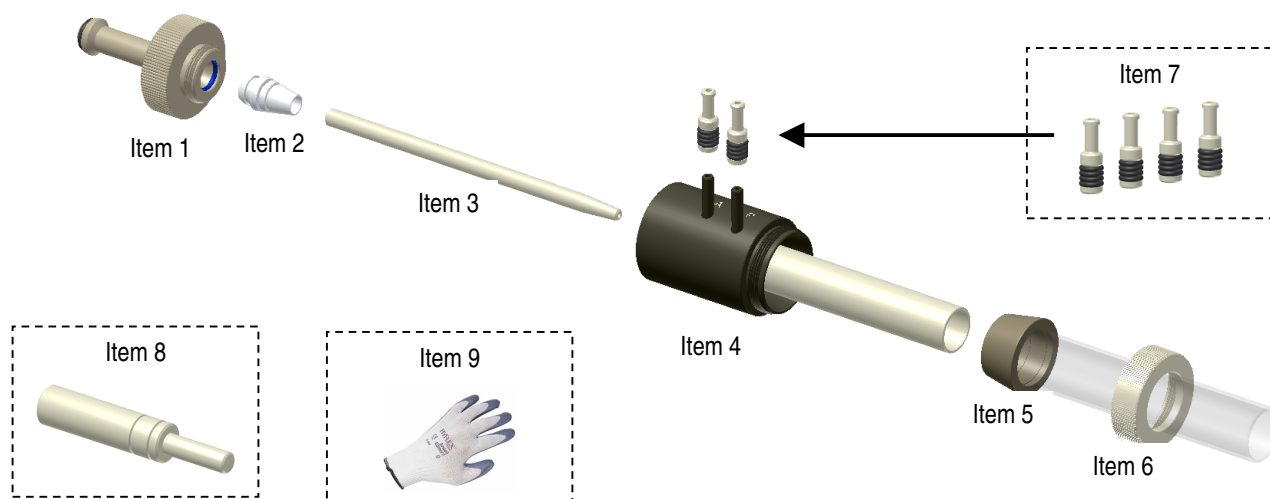
Item No.	Part Number	Description	Qty
1	31-808-3177	SPECTRO INJECTOR ADAPTOR	1
2	31-808-2962	SPECTRO INJECTOR FERRULE	1
3	31-808-2963	SPECTRO RADIAL INJECTOR	Refer Note
4	31-808-2942	SPECTRO D-TORCH BODY	1
5	31-808-2839	SPECTRO RADIAL QUARTZ OUTER TUBE	1
6	31-808-2818	RETAINER	1
7	GAZ-04	GazFit CONNECTORS 4mm (FOUR PER PACK)	Refer Note
8	70-803-0920	INJECTOR FERRULE TOOL	1
9	SAFEGLOVE-MED	SAFETY GLOVES	1

Table 1

Note:

Item 3. D-torch injector not supplied with standard D-torch assembly (Shown for reference only). There is a range of different injectors suitable for Spectro D-Torch – These can be purchased from your D-Torch supplier

Item 7. Use GazFit connectors to attach ICP tubes to the D-torch side arms. Four connectors are supplied (two spare).



Scope

1. Precautions for personal safety and D-Torch preservation.
2. Removal of D-torch outer tube.
3. Re-attach D-Torch outer tube.
4. How to access the D-Torch injector.
5. Replacement of injector ferrule.

* The D-Torch is covered by US Patent 7,847,210 B2

D-Torch* for Spectro Radial Part Number 30-808-2928

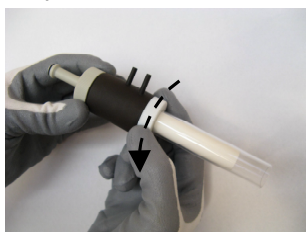
1. Precautions for personal safety and D-Torch preservation

- Always wear safety gloves (item 9) and safety glasses when handling ICP torches.
- It is recommended you read and understand this procedure before starting.
- The person performing this work must be competent in making basic ICP connections
- The ICP torch is made from high grade engineered materials – Handle with extreme care

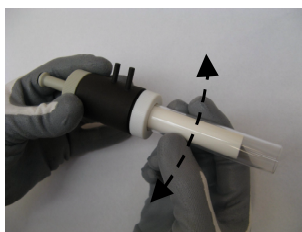
2. REMOVAL OF D-TORCH OUTER TUBE

The D-Torch outer tube is accurately located in place with the retainer. The outer tube can be removed at any time by completing the following steps.

- 2.1. If fitted, remove D-Torch assembly from ICP (not shown).
- 2.2. Unscrew retainer ½ turn
- 2.3. Grip outer tube (lower end, near D-Torch body) then wriggle tube from side to side – refer figure 3.3
You will hear a “click” as the outer tube releases
- 2.4. Fully unscrew the retainer then carefully withdraw the outer tube from the D-Torch body.



2.2.



2.3.



2.4.

Note!

D-Torch outer tube is permanently fitted with a taper ferrule - Do not attempt to remove ferrule from outer tube.

Alumina inner tube is permanently fixed to D-Torch body - Do not attempt to remove alumina inner tube from D-Torch body

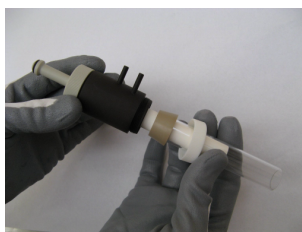
3. RE-ATTACH D-TORCH OUTER TUBE

To fit the D-Torch outer tube to D-Torch body, complete the following steps.

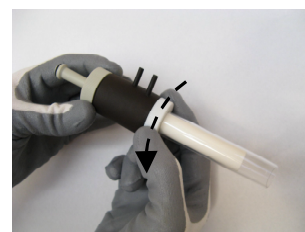
- 3.1 Check that both locating surfaces (outer tube and torch body) are clean and free from damage.
- 3.2 Carefully slide the outer tube over the inner tube – the outer tube will self locate into the torch body.
- 3.3 Tighten the retainer to fix the outer tube in place.
Do not over tighten retainer (Hand tightening is adequate)



3.1.



3.2.



3.3

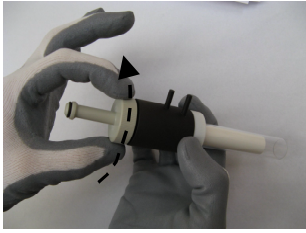
- 3.4 If required, return D-Torch to ICP and connect as normal (not shown).

D-Torch* for Spectro Radial Part Number 30-808-2928

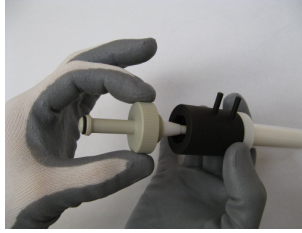
4. HOW TO ACCESS THE D-TORCH INJECTOR

To remove the injector

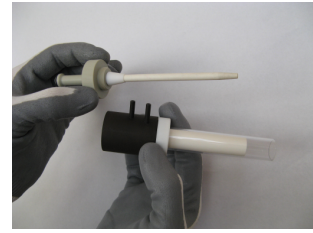
- 4.1 Unscrew the injector adaptor from the rear of the D-Torch and carefully remove the adaptor from D-Torch body.



4.1a



4.1b



4.1c

- 4.2 Slide the injector out from the injector adaptor

Check condition of the ferrule – Replace ferrule if damaged or deteriorated (refer section 5)



4.2a



4.2b

To reinstall Injector to the D-Torch

Repeat steps 4.1 and 4.2 in reverse order.

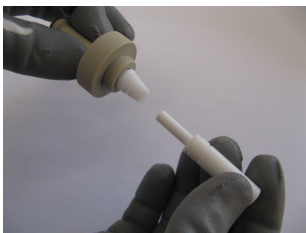
Note! Push injector all the way into the injector ferrule. (End of injector must butt-up against inside of adaptor).

5. REPLACEMENT OF INJECTOR FERRULE

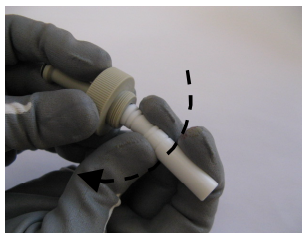
To replace the injector ferrule, complete the following steps: -

- 5.1 Insert the injector ferrule tool (item 7) into injector ferrule then pivot tool sideways to unseat the ferrule from the injector adaptor - Discard ferrule.

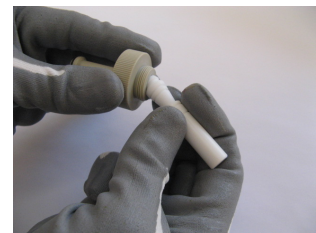
You may need to apply a moderately high amount of force to un-seat the injector ferrule from the adaptor.



5.1a

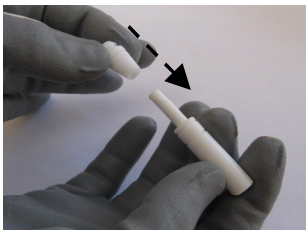


5.1b



5.1c

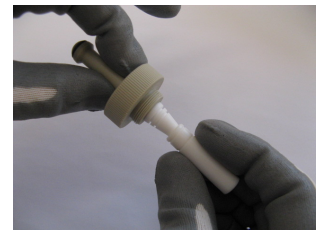
- 5.2 Place a new injector ferrule (item 2) onto the stem of injector ferrule tool. Position the ferrule into the adaptor and push together until you feel the ferrule seat with adaptor o-ring.



5.2a



5.2b



5.2c

It can help if you swivel (pivot, like step 5.1) the injector ferrule tool whilst pushing-in the injector ferrule.

Finished! If you have any questions regarding the D-Torch assembly or this procedure, please contact your supplier.