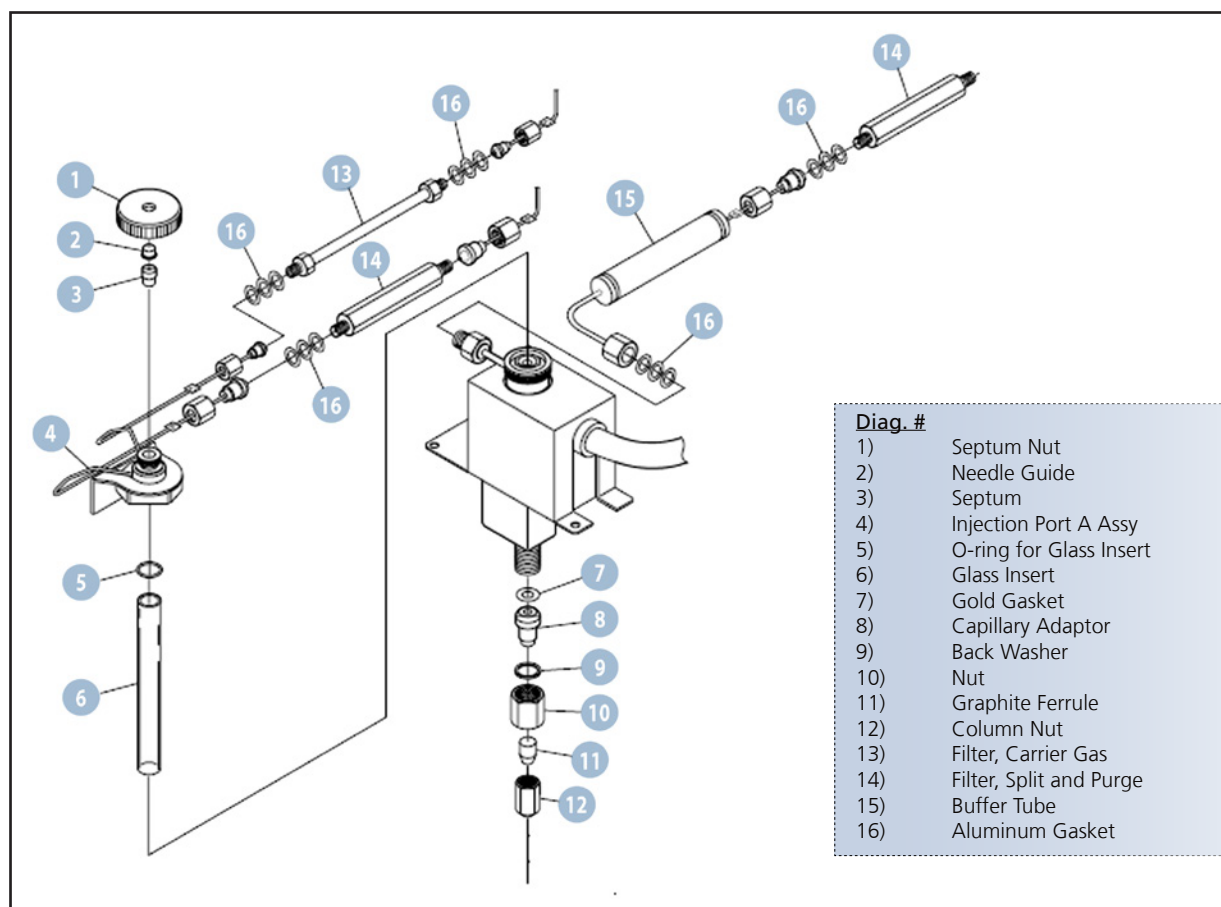


Gas Chromatograph

GC Consumables





Injection Port

Diag. #	Part No.	Name	Description
1	221-72615-00	Septum Nut	Works for all GC, SPL
1	221-13372-00	Septum Nut for Packed INJ	Works for GC-2014 Packed INJ
2	221-44584-00	Needle Guide	Works for all GC

Septa / O-ring

Diag. #	Part No.	Name	Description
3	220-90638-00	Septa, Blue	Low temperature (up to 250 deg C)
3	220-94781-00	Septa, Thermogreen	Medium temperature (up to 340 deg C)
3	220-90547-00	Septa, Thermolite	Medium temperature (up to 340 deg C)
3	220-90290-00	Septa, Red	High temperature (300 deg C +)
3	220-94792-00	Septa for Pyrolysis	High temperature for use with Frontier Pyrolyzer
3	221-48398-91	High Temperature SUN SRI HT-SP Injector Septa	Operate up to temperature of 306 deg C, Red color, 25/pk
3	201-35584-00	Low Temperature Shimadzu Injector Septa	Operate up to temperature of 200 deg C, Cream-white color, 20/pk
5	036-11201-84	O-ring for liner	O-ring for sealing OCI liner, 5/pk
5	036-11203-84	O-ring for liner	O-ring for sealing glass liners, fluoride rubber (up to 450 deg C), 5/pk
5	221-47222-91	Graphite o-ring for liner	Graphite o-ring for splitless/WBI, high temperature (350-450 deg C), 5/pk
5	221-48393-91	Graphite o-ring for liner	Graphite o-ring for split, high temperature (350-450 deg C), 5/pk
5	221-49662-91	O-ring for liner when using a pyrolyzer	O-ring for sealing glass liners when using a pyrolyzer

Glass Inserts / Liners

Diag. #	Part No.	Name	Description
6	220-90784-00	Split liner with wool	General purpose split liner with wool, 5/pk (replaces 220-94590-00)
6	220-90784-25	Split liner with wool	General purpose split liner with wool, 25/pk
6	220-94766-00	Split liner for focusing	Liner used for focusing a split injection with wool
6	221-41444-01	Split liner w/o wool	General purpose split liner w/o wool, individually packed
6	220-94767-00	Splitless liner for focusing	Liner used for focusing a splitless injection
6	221-48876-02	Splitless liner with wool	Splitless liner with wool and tapered bottom, 5/pk (liner included in GCMS from SSI)
6	221-48876-03	Splitless liner with wool on bottom	
6	220-94734-01	Splitless drilled uniliner with hole near the top	Liner used for splitless analysis for chlorinated pesticides, aqueous injection and compounds of interest that elute away from tailing solvent peak, 5/pk
6	220-94734-02	Splitless drilled uniliner with hole near the bottom	Liner used for splitless analysis for volatile compounds that elute near the tailing solvent peak, 5/pk
6	220-94734-03	Splitless gooseneck drilled uniliner with hole at the top	Liner used for splitless analysis for chlorinated pesticides, aqueous injection and compounds of interest that elute away from tailing solvent peak; top restriction used to hold sample cloud for greater column loading, 5/pk
6	220-94734-04	Splitless gooseneck drilled uniliner with hole at the bottom	Liner used for splitless analysis for volatile compounds that elute near the tailing solvent peak, top restriction used to hold sample cloud for greater column loading, 5/pk
6	220-94735-01	Direct injection liner with wool on bottom	Liner for direct injections of dirty samples, wool acts as a filter, 5/pk
6	220-94768-00	Mega-bore liner w/o wool	Liner for megabore columns (0.53mm), 5/pk
6	220-94769-00	Low volume liner	Liner for SPME or Purge and Trap applications
6	221-49381-02	OCI glass liner	Liner for 'simple on-column' or 'near on-column', for use with columns smaller than 0.53mm id
6	221-49300-00	LV/PTV glass liner	Liner for large volume pvt injections on a capillary column w/o wool
6	221-49298-91	OCI metal liner	Liner for true on-column injection with columns 0.53mm id
6	221-74665-92	OCI insert	Liner for on-column injection ports

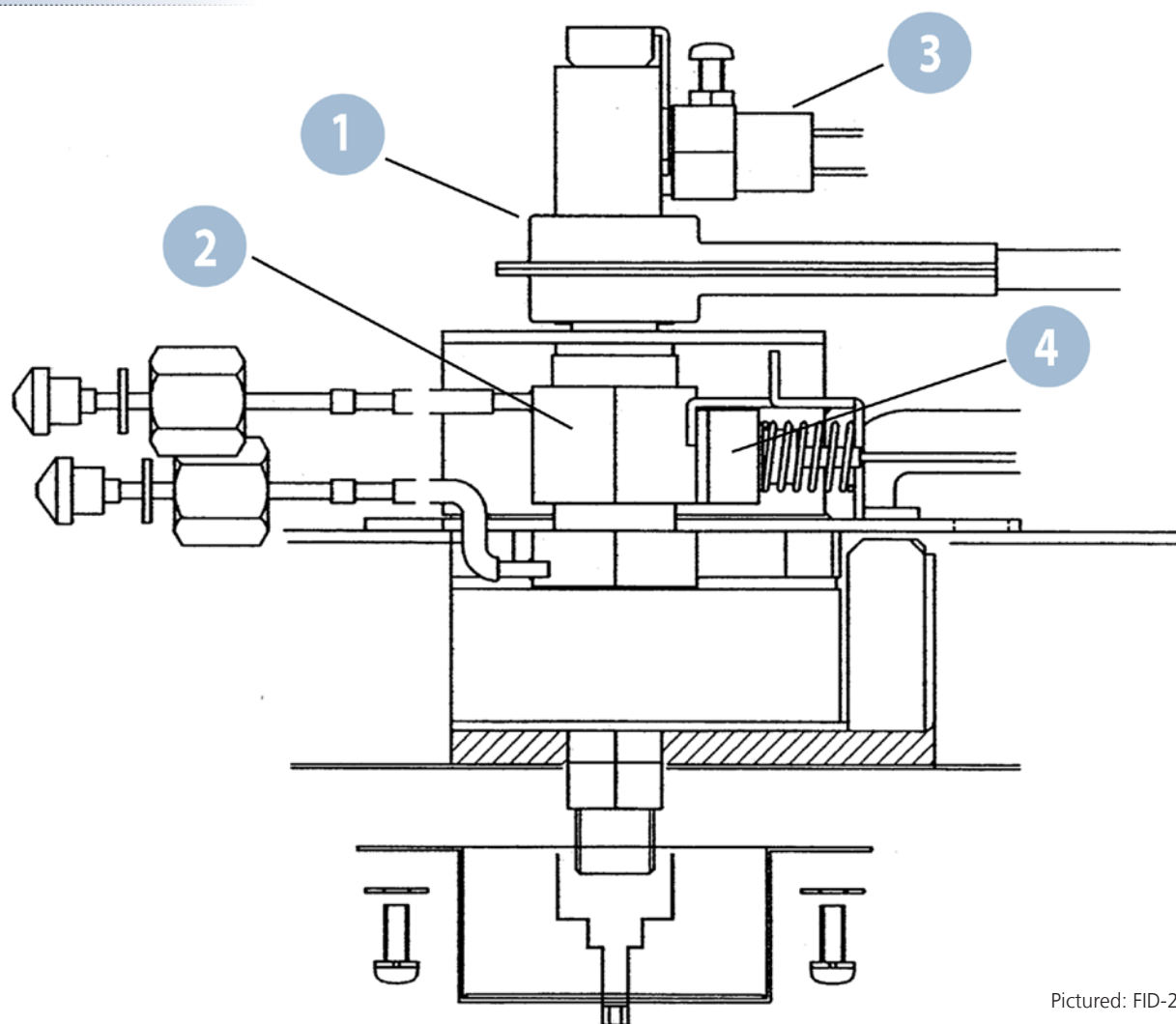
Additional Injection Port Items

Diag. #	Part No.	Name	Description
7	221-49065-91	Gold Gasket	Gasket used for sealing the adapter to the base, 5/pk
8	225-10167-91	Injection port capillary adaptor for GCMS	Adaptor for connecting capillary columns for INJ on MS
11	220-90418-14	Ferrule: GVF-004	Capillary MS ferrule for 0.25mm id columns, 10/pk
11	220-90418-15	Ferrule: GVF-005	Capillary MS ferrule for 0.32mm id columns, 10/pk
11	220-90418-18	Ferrule: GVF-008	Capillary MS ferrule for 0.53mm id columns, 10/pk
12	670-11009-00	Column nut	Column nut 1/16" for GC and MS (on MS systems), 5/pk
8	221-74663-00	OCI injection port adaptor	Adaptor for connection capillary columns to on-column injector
8	221-42998-00	Injection port capillary adaptor for GC	Adaptor for connecting capillary columns to a standard GC
11	220-90765-00	Ferrule, 0.4mm	Graphite ferrules, for 0.25mm columns, 10/pk
11	221-32126-05	Ferrule, 0.5mm	Graphite ferrules, for 0.25mm-0.32mm columns, 10/pk
11	221-32126-08	Ferrule, 0.8mm	Graphite ferrules, for 0.53mm columns, 10/pk
12	221-32705-00	Column nut for GC	Slotted nut for column connection on injection port and detector side for GC
13	221-34121-94	Filter, carrier gas	Filter for incoming carrier gas, MS-5A
14	221-42559-92	Filter, split and purge	Filter for outgoing gas through split and purge, silica gel
14	221-42595-92	Filter, split and purge for harsh solvents	Filter for outgoing gas through split and purge, activated carbon
16	201-35183-00	Aluminum Gasket	Gasket used for sealing the G-fittings

[3 dalis](#)

Diag. #

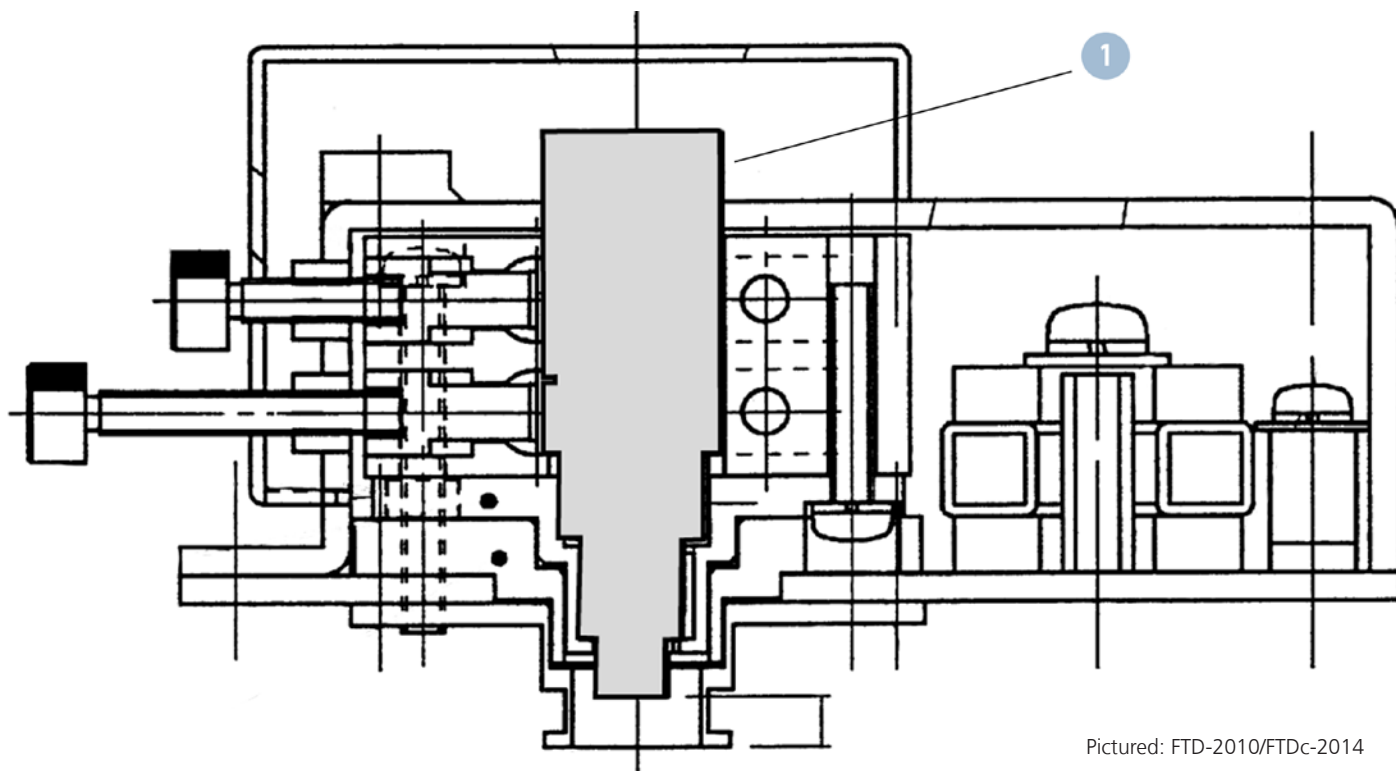
- 1) Collector
- 2) Nozzle
- 3) Igniter
- 4) High Voltage Clip



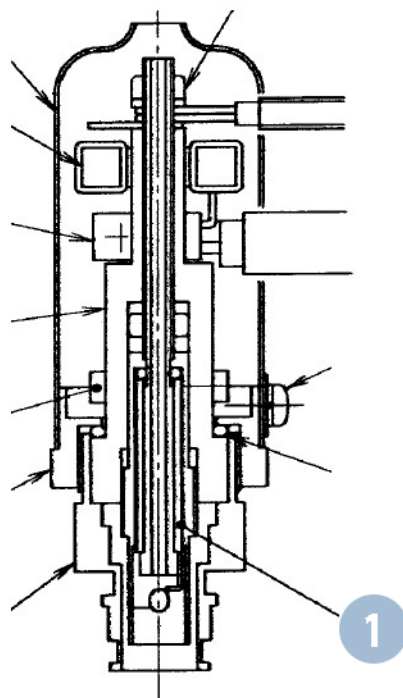
Pictured: FID-2010 series

Detectors - FID

Diag. #	Part No.	Name	Description
1	221-72322-91	Collector	For FID-2010 series
1	221-47659-92	Collector	For FID-2014
2	221-48258-91	Nozzle, Capillary	0.3mm ID, for FID/FTD-2010 series
2	221-48885-91	Nozzle, Packed	0.5mm ID, for FID/FTD-2010 series
2	221-49373-91	Nozzle, Aqueous	0.8mm ID, for FID/FTD-2010 series
2	221-70162-93	Nozzle, Capillary	0.3mm ID, for FID/FTD-2014
2	221-70162-92	Nozzle, Factory Capillary	0.5mm ID, for FID/FTD-2014, comes standard with single capillary FID-2014
2	221-70162-95	Nozzle, Factory Packed	0.5mm ID, for FID/FTD-2014, comes standard with dual packed FID-2014
2	221-70162-96	Nozzle, Aqueous	0.8mm ID, for FID/FTD-2014
3	221-41847-93	Igniter filament	Glow plug for FID-2010 series and FID-2014 series
4	221-47146-91	High Voltage Clip	High voltage electrode for FID/FTD-2010 series
4	221-47146-92	High Voltage Clip	High voltage electrode for FID/FTD-2014



Pictured: FTD-2010/FTDc-2014



Pictured: FTD-2014

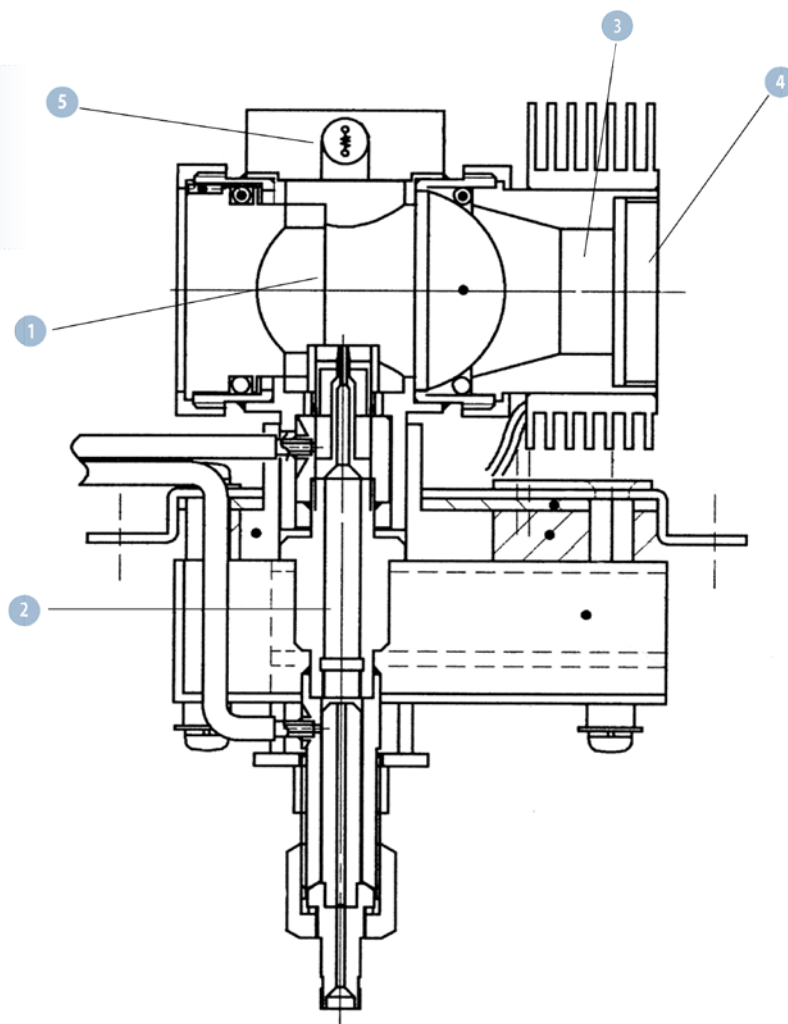
Diag. #
1) Collector Bead

Detectors - FTD

Diag. #	Part No.	Name	Description
1	221-45586-91	Collector Bead (standard)	For FTD-2010 and FTDc-2014 (capillary model)
1	221-71513-91	Collector Bead (special)	For FTD-2010 Plus
1	221-18704-91	Collector Bead (packed)	For FTD-2014 (packed model)
	221-49079-91	Collector regeneration kit	Used to regenerate the collector assy
	221-70846-91	Collector regeneration adapter	Used to hold the collector assy during regeneration

Diag. #

- 1) Quartz Tube
- 2) Nozzle
- 3) Filter
- 4) PMT
- 5) Igniter Filament



Pictured: FPD-2014

Detectors - FPD

Diag. #	Part No.	Name	Description
1	221-46552-00	Quartz tube	For FPD-2010 series and FPD-2014
2	221-48423-91	Quartz nozzle	For packed analysis on FPD-2010 series
2	221-70735-91	Stainless steel nozzle	For capillary analysis on FPD-2014
2	221-70348-91	Quartz nozzle	For packed analysis on FPD-2014
3	221-46310-01	Filter for S	For FPD-2010 and FPD-2014
3	221-46310-02	Filter for P	For FPD-2010 and FPD-2014
3	221-46310-03	Filter for Sn	For FPD-2010 and FPD-2014
3	221-73354-01	Filter for S	For FPD-2010 Plus
3	221-73354-02	Filter for P	For FPD-2010 Plus
3	221-73354-03	Filter for Sn	For FPD-2010 Plus
4	221-48578-00	PMT for FPD-2010 and FPD-2014	PMT R5983 for FPD-2010 and FPD-2014
4	221-73413-00	PMT for FPD-2010 Plus	PMT R5983+ for FPD-2010 Plus
5	221-73430-82	Igniter filament	For FPD-2010
5	221-73430-91	Igniter filament	For FPD-2010 Plus
	036-19006-17	O-ring for FPD Filter	O-ring for outside the filter, for FPD-2010 series and FPD-2014
	036-19006-14	O-ring for FPD Filter	O-ring for inside the filter, for FPD-2010 series and FPD-2014
	036-11018-00	O-ring for photomultiplier housing	O-ring for PMT housing for FPD-2010 and FPD-2014
	036-11019-84	O-ring for photomultiplier housing	O-ring for PMT housing for FPD-2010 Plus, 5pk
	221-73430-93	Igniter filament	For FPD-2014
	221-70562-00	Aluminum washer	For FPD-2014 under the igniter head section

Tool Kit

Diag. #	Part No.	Name	Description
1	221-41532-92	Graphite Ferrule Jig FID/FTD-2010	Used to set insertion depth for FID/FTD-2010 series
1	221-41532-98	Graphite Ferrule Jig FID/FTD-2014	Used to set insertion depth for FID/FTD-2014
1	221-48610-01	Graphite Ferrule Jig TCD-2010	Used to set insertion depth for TCD-2010 series
1	221-48610-03	Graphite Ferrule Jig ECD-2010	Used to set insertion depth for ECD-2010 series
1	221-41532-91	Graphite Ferrule Jig SPL	Used to set the insertion depth for SPL-2010 series
2	086-11002-00	Phillips screwdriver	#2 Phillips screwdriver
3	086-16101-00	Tweezers	Replacement tweezers from ship kit
4	086-10403-00	Flat-head scredriver	Flat-head 100mm screwdriver
5	670-18800-00	Nut Driver, 8mm deep set	User for FID nozzle/jet removal
6	086-03011-00	Wrench, 10mm x 12mm	Open ended 10mm and 12mm wrench
6	086-03003-00	Wrench, 6mm x 8mm	Open ended 6mm and 8mm wrench
7	221-46977-00	Injection port wrench	Used to open injection port top for insert/o-ring replacement
8	221-35566-92	G-type plug	Used for leak checking injection port, 2/pk

1



2



4



3



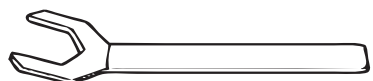
5



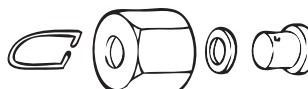
6



7



8



Additional Tools

Part No.	Name	Description
221-47159-00	Column Hanger	Hanger style, for upto 2 columns
221-43947-91	Column Hanger	Windmill style, compatible with any caged capillary columns, upto 2 holder with two columns
220-94797-04	GC TCD/FPD Sensitivity Test Mix	Installation test mix for TCD/FPD
220-94797-05	GC FID/ECD/FTD Sensitivity Test Mix	Installation test mix for FID/ECD/FTD
220-94575-00	GC Test Standard for FID/FTD/FPD/PID	Alternate standard for GC testing
220-94576-00	GC Test Standard for ECD	Alternate standard for GC testing
220-94859-10	Helium carrier filter kit	Gas filter for incoming helium line, includes filter and mounting brackets
220-94859-20	Helium filter replacement cartridge	Replacement cartridge for 220-94859-10 kit
220-90623-00	Helium Purifier	Gas filter for incoming helium line
220-90623-01	Nitrogen/Argon/Methane Purifier	Gas filter for incoming nitrogen/argon/methane line
220-90623-02	Hydrogen Purifier	Gas filter for incoming hydrogen line
221-48600-00	Silica Wool	Deactivated wool, 2g/container
220-94702-00	Column cutting tool	Ceramic capillary cutting wafer
221-34618-00	Syringe	Syring for Manual injection, for use with AOC-20i, 0.63 (23 gauge)

Packed S.S.COL to INJ

Part No.	Name	Description
221-48886-00	Liner for Packed Column Adaptor/WBC	Used as the liner when using the packed column and WBC adaptor
221-14087-91	Stainless Steel Column Adaptor for INJ	Used on injection port side only, GF side is cut so only 5-10mm of the 2mm tubing is left
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects to injector (the MF nut on the adapter is removed)
220-90014-01	Union, 2mm to 1/8"	Used on the 2mm tubing side of column adapter to connect directly to 1/8" columns
220-90014-02	Union, 2mm to 1/4"	Used on the 2mm tubing side of column adapter to connect directly to 1/4" columns
220-94669-01	Union, 2mm to 1/16"	Used on the 2mm tubing side of the column adapter to connect directly to 1/16" columns
221-22206-00	Injection port spacer	Used with packed injection ports, must be placed under the septa (channel side down) to ensure flow through liner

Packed S.S. COL to TCD

Part No.	Name	Description
221-10076-91	TCD sleeve ferrule	Used on TCD detector adaptor sleeve, 10pk
221-10079-91	Stainless Steel Column Adaptor for TCD	Used on TCD side, includes sleeve, back washer, spring and nut, GF side is cut so only 5-10mm of the 2mm tubing is left
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects to detector (the MF nut from kit is removed)
220-90014-01	Union, 2mm to 1/8"	Used on the 2mm tubing side of column adapter to connect directly to 1/8" columns
220-90014-02	Union, 2mm to 1/4"	Used on the 2mm tubing side of column adapter to connect directly to 1/4" columns
220-94669-01	Union, 2mm to 1/16"	Used on the 2mm tubing side of the column adapter to connect directly to 1/16" columns

Packed S.S. COL to DET

Part No.	Name	Description
221-08882-91	Stainless Steel Column Adaptor	Used on all detector sides (except TCD), GF side is cut so only 5-10mm of the 2mm tubing is left
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects to detector (the MF nut from kit is removed)
220-90014-01	Union, 2mm to 1/8"	Used on the 2mm tubing side of column adapter to connect directly to 1/8" columns
220-90014-02	Union, 2mm to 1/4"	Used on the 2mm tubing side of column adapter to connect directly to 1/4" columns
220-94669-01	Union, 2mm to 1/16"	Used on the 2mm tubing side of the column adapter to connect directly to 1/16" columns

Capillary COL to non-capillary INJ

Part No.	Name	Description
221-48886-00	Liner for Packed Column Adaptor/WBC	Used as the liner when using the packed column and WBC adaptor
221-29676-00	WBC Injector side Adaptor	Used on injection port side only to connect capillary columns
201-30008-00	Nut, MF	Used on the adaptor to connect to the base of the injection port and detector
201-30051-84	Washer, M	Used in the MF Nut as a backwasher
221-22206-00	Injection port spacer	Used with packed injection ports, must be placed under the septa (channel side down) to ensure flow through liner

Capillary COL to non-capillary TCD

Part No.	Name	Description
221-10076-91	TCD sleeve ferrule	Used on TCD detector adapter sleeve
221-10073-00	TCD sleeve	Used on TCD detector packed column and WBC adaptor
221-29757-00	WBC Detector side Adaptor	Used on detector side only to connect capillary columns (no makeup connection)
201-30008-00	Nut, MF	Used on the adaptor to connect to the base of the injection port and detector
201-30051-84	Washer, M	Used in the MF Nut as a backwasher
221-34012-91	WBC Detector side Adaptor with MUP	Used on detector side only to connect capillary columns with ability to add makeup flow
221-46403-92	Adaptor Ferrule	Used on the detector adaptor with MUP line, 5mm, 4/pk
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects to detector (the MF nut from kit is removed)

Capillary COL to non-capillary FID

Part No.	Name	Description
221-33193-91	WBC Detector side Adaptor for FID	Used on FID side only to connect capillary columns (no makeup connection), also contains nut and washer
221-34012-91	WBC Detector side Adaptor with MUP	Used on detector side only to connect capillary columns with ability to add makeup flow
221-46403-92	Adaptor Ferrule	Used on the detector adaptor with MUP line, 5mm, 4/pk
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects to detector (the MF nut from kit is removed)

Glass COL (5mm x 3mm) to INJ

Part No.	Name	Description
221-46403-92	Ferrule, 5mm	Used on the glass column
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects the column to the injector
221-14094-00	Glass Insert	Used as the injector insert for glass columns
221-22206-00	Injection port spacer	Used with packed injection ports, must be placed under the septa (channel side down) to ensure flow through liner

Glass COL (5mm x 3mm) to TCD

Part No.	Name	Description
221-10076-91	TCD sleeve ferrule	Used on TCD detector adapter sleeve
221-10073-00	TCD sleeve	Used on TCD detector packed column and WBC adaptor
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects the column to the detector

Glass COL (5mm x 3mm) to DET

Part No.	Name	Description
221-46403-92	Ferrule, 5mm	Used on the glass column
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects the column to the detector

I Autoinjector Syringes (42mm Needle Length)

Part No.	Name	Description
221-34618-00	SGE Series II Autoinjector Syringe	10uL, 0.63mm OD (23 gauge) fixed cone tip style needle, shipped with AOC-20i
220-90624-00	Hamilton Autoinjector Syringe	10uL, 0.63mm OD (23 gauge) fixed cone tip style needle, teflon tipped (gas tight) plunger
220-90282-20	SGE Series II Autoinjector Syringe	10uL, 0.63mm OD (23 gauge) removable cone tip style needle
220-90281-20	Needles, 2/pk	Replacements for 220-90282-20 SGE syringe, cone tip style, 0.63mm OD
220-90282-21	SGE Series II Autoinjector Syringe	For on-column injection, 10uL, 0.47mm OD (26 gauge) removable cone tip style needle
220-90281-21	Needles, 2/pk	Replacements for 220-90282-21 SGE syringe, cone tip style, 0.47mm OD for OCI
220-90282-23	Needles, 2/pk	For 220-90282-21 SGE syringe, cone tip style, dual taper 0.47mm and 0.63mm OD for OCI
221-45243-00	SGE Series II Autoinjector Syringe	For PTV Injection, 50uL, 0.63mm OD (23 gauge) fixed cone tip style needle
221-45244-00	SGE Series II Autoinjector Syringe	For PTV Injection, 250uL, 0.63mm OD (23 gauge) fixed cone tip style needle
220-94879-00	AOC-20i Syringe	10uL fixed needle, teflon tipped plunger
221-37282-02	AOC-20i Syringe	10uL fixed needle, tapered needle for on-column injections with OCI-2010

I Needle Guides (under injection port septum retaining nut)

Part No.	Name	Description
221-44823-91	Needle Guide required with AOC-20i, 2/pk	On GC-14, GC-15, GC-17 and GC-2010 Split/Splitless Injection Ports (5.8mm length); Same part as 221-44584 in 2 pack.
221-44584-00	Needle Guide required with AOC-20i	On GC-14, GC-15, GC-17 and GC-2010 Split/Splitless Injection Ports (5.8mm length)
221-45205-00	Needle Guide required with AOC-20i	On GC-14 and GC-15 On Column (OCI) Injection Ports (12mm length)



Shimadzu Corporation

www.shimadzu.com/AN/

Shimadzu Scientific Instruments

7102 Riverwood Drive, Columbia, Maryland 21046, U.S.A.

Phone: 800-477-1227/410-381-1227, Fax: 410-381-1222

www.ssi.shimadzu.com

Webstore: store.shimadzu.com

Company names, product/service names and logos used in this publication are trademarks and trade names of Shimadzu Corporation and its affiliates, whether or not they are used with trademark symbol "TM" or "®". Third-party trademarks and trade names may be used in this publication to refer to either the entities or their products/services. Shimadzu disclaims any proprietary interest in trademarks and trade names other than its own.

For Research Use Only. Not for use in diagnostic procedures.

The contents of this publication are provided to you "as is" without warranty of any kind, and are subject to change without notice. Shimadzu does not assume any responsibility or liability for any damage, whether direct or indirect, relating to the use of this publication.