

Performance Test Report	Intermix & Interchangeability Test Report	Certificate No: 146614918/13 Date : 15-10-2021
Reference : ASTM F1387-19, Annex : A3, A4 & A8		Material : SS316 / 316L
Product : DAWSONS-TECH® & Swagelok® Twin Ferrule Tube Fittings		Page : 1 of 5

Order No. : 146614918

Name of Manufacturer : M/s. DAWSONS-TECH COMPONENTS LLP
 Unit No. DD - 6 & 7, Khan Real Industrial Estate,
 N. H. 08, Pelhar, Vasai Phata, Vasai (East),
 Dist. Palghar - 401208, Maharashtra.

Purpose : To evaluate the compatibility for component combination of DAWSONS-TECH® and Swagelok® Twin Ferrule Tube Fittings tested under Pneumatic Proof Test Annex : A3, Hydrostatic Proof Test Annex : A4 and Hydrostatic Burst Test Annex : A8.

Tube Fittings Specimens

- Each Test Specimens comprising a Male Connector, Union and Cap with Tube in accordance with ASTM F1387-19. (Figure : 1C)

Types & Size of Tube Fitting Used For Intermix And Interchangeability

DAWSONS-TECH® Twin Ferrule Tube Fittings			SWAGELOK® Twin Ferrule Tube Fittings.		
Description	Size	Qty.	Description	Size	Qty.
Male Connector	1/4" ODT X 1/4" NPT	2 Nos.	Male Connector	1/4" ODT X 1/4" NPT	2 Nos.
	3/8" ODT X 3/8" NPT	2 Nos.		3/8" ODT X 3/8" NPT	2 Nos.
	1/2" ODT X 1/2" NPT	2 Nos.		1/2" ODT X 1/2" NPT	2 Nos.
	3/4" ODT X 3/4" NPT	2 Nos.		3/4" ODT X 3/4" NPT	2 Nos.
	1" ODT X 3/4" NPT	2 Nos.		1" ODT X 3/4" NPT	2 Nos.
Union	1/4" ODT	2 Nos.	Union	1/4" ODT	2 Nos.
	3/8" ODT	2 Nos.		3/8" ODT	2 Nos.
	1/2" ODT	2 Nos.		1/2" ODT	2 Nos.
	3/4" ODT	2 Nos.		3/4" ODT	2 Nos.
	1" ODT	2 Nos.		1" ODT	2 Nos.
Cap	1/4" ODT	2 Nos.	Cap	1/4" ODT	2 Nos.
	3/8" ODT	2 Nos.		3/8" ODT	2 Nos.
	1/2" ODT	2 Nos.		1/2" ODT	2 Nos.
	3/4" ODT	2 Nos.		3/4" ODT	2 Nos.
	1" ODT	2 Nos.		1" ODT	2 Nos.

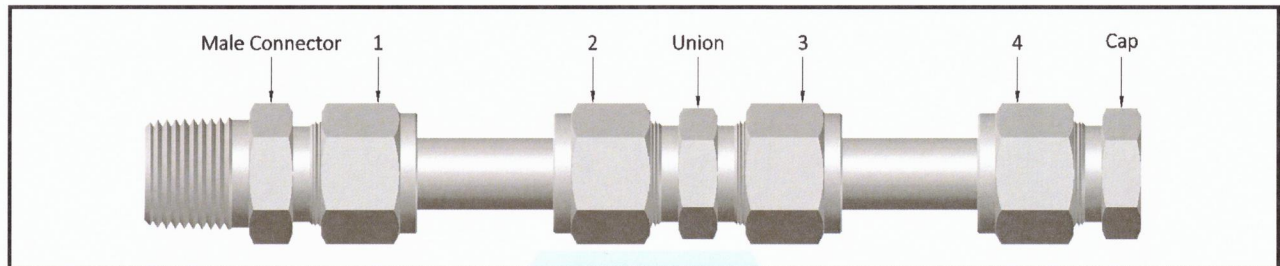
- Disassembled and intermixed the components of DAWSONS-TECH and SWAGELOK Twin Ferrule Tube Fittings, arrange and assembled the Fittings as shown in below mentioned assembly drawing.
- Assembled the fittings by 1-1/4" turn from the finger tight position according to DAWSONS-TECH Twin Ferrule Tube Fitting installation instruction.

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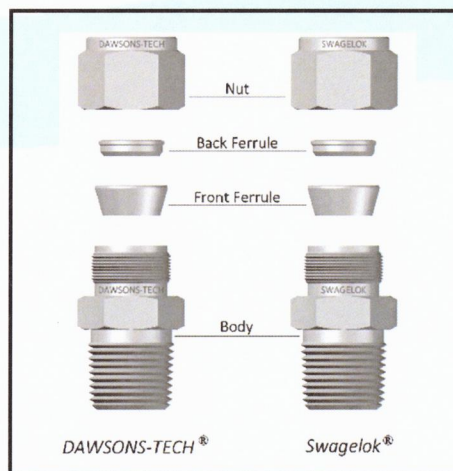
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Product : DAWSONS-TECH® & Swagelok® Twin Ferrule Tube Fittings		Page : 2 of 5



For Test Specimens Size : 1/4" ODT

Tube Size : 1/4" ODT x 0.035" WT. Tube Hardness : 72 to 74 HRB,
 Material : SS316 / 316L, Total Test Specimen : 4 Nos.

Test Specimen No.	Description	1	2	3	4
DTC-SWG-ITR-4-01	Nut	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-4-02	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-4-03	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK
DTC-SWG-ITR-4-04	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK



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Product : DAWSONS-TECH® & Swagelok® Twin Ferrule Tube Fittings		Page : 3 of 5

For Test Specimens Size : 3/8" ODT

Tube Size : 3/8" ODT x 0.049" WT. Tube Hardness : 75 to 78HRB
 Material : SS316 / 316L, Total Test Specimen : 4 Nos.

Test Specimen No.	Description	1	2	3	4
DTC-SWG-ITR-6-01	Nut	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-6-02	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-6-03	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK
DTC-SWG-ITR-6-04	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK

For Test Specimens Size : 1/2" ODT

Tube Size : 1/2" ODT x 0.065" WT. Tube Hardness : 71 to 74 HRB
 Material : SS316 / 316L, Total Test Specimen : 4 Nos.

Test Specimen No.	Description	1	2	3	4
DTC-SWG-ITR-8-01	Nut	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-8-02	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-8-03	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK
DTC-SWG-ITR-8-04	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK


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Product : DAWSONS-TECH® & Swagelok® Twin Ferrule Tube Fittings		Page : 4 of 5

For Test Specimens Size : 3/4" ODT

Tube Size : 3/4" ODT x 0.083" WT. Tube Hardness : 72 to 74 HRB
 Material : SS316 / 316L, Total Test Specimen : 4 Nos.

Test Specimen No.	Description	1	2	3	4
DTC-SWG-ITR-12-01	Nut	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-12-02	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-12-03	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK
DTC-SWG-ITR-12-04	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK

For Test Specimens Size : 1" ODT

Tube Size : 1" ODT x 0.095" WT. Tube Hardness : 70 to 73 HRB
 Material : SS316 / 316L, Total Test Specimen : 4 Nos.

Test Specimen No.	Description	1	2	3	4
DTC-SWG-ITR-16-01	Nut	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-16-02	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	SWAGELOK	SWAGELOK	SWAGELOK
DTC-SWG-ITR-16-03	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	SWAGELOK	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK
DTC-SWG-ITR-16-04	Nut	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	SWAGELOK
	Front Ferrule	SWAGELOK	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH
	Back Ferrule	DAWSONS-TECH	SWAGELOK	DAWSONS-TECH	DAWSONS-TECH
	Body	DAWSONS-TECH	DAWSONS-TECH	DAWSONS-TECH	SWAGELOK



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Procedure : Reference to ASTM F1387-19, Annex: A3, A4 & A8.

Test Results : The test result shows below for the tested above Twin Ferrule Tube Fittings according to above test procedure.

- Each Test Specimen tested satisfactorily with Nitrogen gas pressure @100PSI to shedding of surface bubbles and then 750PSI in accordance with ASTM F1387-19, Annex : A3.
- Each Test Specimen tested Hydrostatic proof to 150% rated pressure in accordance with ASTM F1387-19, Annex : A4.
- Each test specimen Hydrostatic Burst tested ie.4x rated pressure in accordance with ASTM F1387-19, Annex : A8.


Test Specimen Size	Test Specimen No.	Rated Pressure	Hydrostatic Proof Test	Results	Actual Tube Burst @ Pressure	Results
1/4" ODT	DTC-SWG-ITR-4-01	5100 PSI	7650 PSI	Pass	20480 PSI	Pass
	DTC-SWG-ITR-4-02	5100 PSI	7650 PSI	Pass	20425 PSI	Pass
	DTC-SWG-ITR-4-02	5100 PSI	7650 PSI	Pass	20400 PSI	Pass
	DTC-SWG-ITR-4-04	5100 PSI	7650 PSI	Pass	20505 PSI	Pass
3/8" ODT	DTC-SWG-ITR-6-01	4800 PSI	7200 PSI	Pass	19215 PSI	Pass
	DTC-SWG-ITR-6-02	4800 PSI	7200 PSI	Pass	19205 PSI	Pass
	DTC-SWG-ITR-6-02	4800 PSI	7200 PSI	Pass	19238 PSI	Pass
	DTC-SWG-ITR-6-04	4800 PSI	7200 PSI	Pass	19205 PSI	Pass
1/2" ODT	DTC-SWG-ITR-8-01	5100 PSI	7650 PSI	Pass	20500 PSI	Pass
	DTC-SWG-ITR-8-02	5100 PSI	7650 PSI	Pass	20445 PSI	Pass
	DTC-SWG-ITR-8-02	5100 PSI	7650 PSI	Pass	20478 PSI	Pass
	DTC-SWG-ITR-8-04	5100 PSI	7650 PSI	Pass	20435 PSI	Pass
3/4" ODT	DTC-SWG-ITR-12-01	4300 PSI	6450 PSI	Pass	17310 PSI	Pass
	DTC-SWG-ITR-12-02	4300 PSI	6450 PSI	Pass	17235 PSI	Pass
	DTC-SWG-ITR-12-02	4300 PSI	6450 PSI	Pass	17260 PSI	Pass
	DTC-SWG-ITR-12-04	4300 PSI	6450 PSI	Pass	17210 PSI	Pass
1" ODT	DTC-SWG-ITR-16-01	3600 PSI	5400 PSI	Pass	14420 PSI	Pass
	DTC-SWG-ITR-16-02	3600 PSI	5400 PSI	Pass	14463 PSI	Pass
	DTC-SWG-ITR-16-02	3600 PSI	5400 PSI	Pass	14410 PSI	Pass
	DTC-SWG-ITR-16-04	3600 PSI	5400 PSI	Pass	14425 PSI	Pass

Pass : No Leakage detected during the test.

Conclusion : It is considered that, the DAWSONS-TECH Twin Ferrule Tube Fittings were totally Intermixable and Interchangeable with SWAGELOK make Tube Fittings.

For, **TUV Rheinland (India) Pvt. Ltd.**

MR Dadina



Malcolm Dadina
(General Manager - Industrial Services)

TUV Rheinland (India) Pvt. Ltd.

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