

**SGS IBR JN: 25747A11**

Report to: XXXXXXXXXX  
 Docs Diesel  
 614 E. Edgerton St.  
 Bryan, OH 43506

PO Number: Credit Card

**Sample Description: Spin-on Filter**  
 Sample Source: Doc's Diesel  
 Sample Received Date: 2nd August 2022

**Test Method: SAE J1985 (OCT2013) Fuel Filter- Initial Single-Pass Efficiency Test Method**



Signed: *Michael Conrad*  
 Michael Conrad  
 Senior Test Technician

Authorized by: *Casey Frantz*  
 Casey L. Frantz  
 Liquid Lab Manager

Revision	Editorial or Technical	Description	Approved By	Release Date
		Initial Report Release	cf	5-Aug-22

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**Test Method: SAE J1985 (OCT2013) Fuel Filter- Initial Single-Pass Efficiency Test Method**

Test Laboratory: SGS IBR Laboratories	Test Date: 4th August 2022
Performed for: Docs Diesel	Location: Bryan, OH 43506
SGS IBR Test No: 25747A11	Contact: <span style="background-color: black; color: black;">XXXXXXXX</span>
Source: Doc's Diesel	Date Received: 2nd August 2022

**Filter Element Identification:**

Customer Sample ID: Doc's Premium Fuel Filter Set DFD4615	SGS IBR ID: 25747-22
Housing ID: X0037V8CR3 VEDURME PFB103	
Filter Orientation: Vertical	Flow Direction: Outside to Inside

**Operating Conditions**

Test Fluid: <u>Viscor L4264 V96D</u>	Batch: <u>176014</u>
Viscosity at test Temperature (mm <sup>2</sup> /s) <u>2.7</u>	Temperature: <u>40-41°C</u>

Test Contaminant: ISO 12103-1 A2 Fine Test Dust	Analysis # 14855F
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**Test System:**

Flow Rate: 4 lpm	System Volume (L): 7
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**Injection System**

Injection Parameters	Initial	Final	Average injection parameters		
Injector Gravimetric Level (mg/L)	179	151		Initial	Final
			Injection flow (L/min)	0.12	0.12
Base Upstream Gravimetric level (mg/L)	4.9		Gravimetric level (mg/L)	5.4	4.5

**Test Results**
**Element Integrity**

Bubble Point to ISO 2942 ("H <sub>2</sub> O):	<u>3</u>
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**Differential Pressure**

Filter Assembly	<u>31.0 psid</u>
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**Filtration Ratio and Efficiency**

Average Filtration Ratio	2	10	75	100	200	1000
Average Efficiency	50%	90%	98.7%	99%	99.5%	99.9%
Particle Size, µm	<3	<3	3.0	3.2	3.5	4.7

pg 2/4

Performed by: MAC

Data Location: MAC-220803

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.

**SGS IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Phone 517-522-8453 Fax 517-522-3695**

Performed for: Docs Diesel  
 SGS IBR Test No: 25747A11  
 Test Date: 4th August 2022

Location: Bryan, OH 43506  
 Contact: Max Nihart  
 Date Received: 2nd August 2022

**Customer Sample ID: Doc's Premium Fuel Filter Set DFD4615**

**SGS IBR ID: 25747-22**

Time MIN	Filter Assembly Differential Pressure psid	Port	Particles / 120 ml at: (micron c)															
			≥3	Beta	≥4	Beta	≥5	Beta	≥8	Beta	≥10	Beta	≥12	Beta	≥15	Beta	≥20	Beta
2	31.0	Upstream	3170813		1479795		713486		192054		82892		44767		26800		11377	
		Downstream	36914	86	2804	528	709	1006	104	1847	33	2512	8	5596	1	26800	0	>11377
		Efficiency	98.84		99.81		99.90		99.95		99.96		99.98		>99.99		>99.99	
5	30.7	Upstream	3249253		1498981		720464		191489		83722		44820		27101		11360	
		Downstream	39063	83	2767	542	630	1144	69	2775	13	6440	4	11205	2	13550	1	11360
		Efficiency	98.80		99.82		99.91		99.96		99.98		>99.99		>99.99		>99.99	
10	30.4	Upstream	3503441		1618090		779983		206152		87892		46693		28302		12437	
		Downstream	41891	84	2839	570	514	1517	48	4295	6	14649	2	23347	1	28302	0	>12437
		Efficiency	98.80		99.82		99.93		99.98		>99.99		>99.99		>99.99		>99.99	
20	30.5	Upstream	3378874		1581131		764295		201877		83828		43601		26482		10971	
		Downstream	43424	78	2748	575	426	1794	31	6512	5	16766	1	43601	0	>26482	0	>10971
		Efficiency	98.71		99.83		99.94		99.98		>99.99		>99.99		>99.99		>99.99	
30	30.8	Upstream	3087674		1423774		690184		181613		76497		40863		24557		10194	
		Downstream	46762	66	2962	481	454	1520	43	4224	7	10928	2	20432	1	24557	0	>10194
		Efficiency	98.49		99.79		99.93		99.98		>99.99		>99.99		>99.99		>99.99	
40	30.5	Upstream	3046299		1406585		677799		176808		74147		38637		23267		9734	
		Downstream	49098	62	3334	422	558	1215	48	3684	7	10592	1	38637	0	>23267	0	>9734
		Efficiency	98.39		99.76		99.92		99.97		>99.99		>99.99		>99.99		>99.99	
50	30.0	Upstream	3184010		1485184		716648		187620		78723		41481		24769		10635	
		Downstream	52815	60	3509	423	548	1308	38	4937	6	13120	2	20741	1	24769	0	>10635
		Efficiency	98.34		99.76		99.92		99.98		>99.99		>99.99		>99.99		>99.99	
60	30.3	Upstream	2996337		1389360		668153		170077		69289		36146		22278		9310	
		Downstream	53366	56	3672	378	532	1256	41	4148	4	17322	2	18073	2	11139	0	>9310
		Efficiency	98.22		99.74		99.92		99.98		>99.99		>99.99		>99.99		>99.99	
Average	30.5	Upstream	3202088		1485363		716377		188461		79624		42126		25444		10752	
		Downstream	45417	71	3079	482	546	1311	53	3573	10	7864	3	15319	1	25444	0	86019
		Efficiency	98.58		99.79		99.92		99.97		99.99		>99.99		>99.99		>99.99	

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 pg 3/4 Performed by: MAC Data Location: MAC-220803  
 SGS IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Phone 517-522-8453 Fax 517-522-3695

**INSTRUMENT LIST - Reported Values**

Performed for:	Docs Diesel
SGS IBR Test No:	25747A11
Test Date:	4th August 2022
Data Location:	MAC-220803

**Reported Instruments:**

Function	Range	Manufacturer	Model#	SGS IBR #	Calibration Due
Differential Pressure	6-54 psid	Omega	PX760-060D1	ODP-39	June 2023
Test Flow	0.4-30 lpm	Endress + Hauser	63FS08	OF-103	November 2023
Temperature	-40 - 200 °C	Extech	407907	T-32	November 2022

**Particle Counters (calibrated per ISO 11171)**

Location	Range	Manufacturer	Model#	Serial #	Next Primary Calibration
Upstream Sensor	N/A	Pacific Scientific	8000A	G01101	November 2022
Downstream Sensor	N/A	Pacific Scientific	8000S	E12106	November 2022
Upstream Counter	3-100 µm	Pacific Scientific	LD-400	D6062701	July 2023
Downstream Counter	3-100 µm	Pacific Scientific	LD-400	D6062702	July 2023

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pg 4/4

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