



TEST REPORT

Performed for: Filtration Solutions Location: Olathe,KS Contact: R.Fields
 IBR JN: 9097
 Date: 4/2/07

Test Method: Modified ISO 16889 (1999) Fractional Efficiency-Multipass
 Modification: Single add of 2 grams, 60 minute test duration
 Fluid: MIL H-5606 Temperature:40C
 Initial pressure drop: 50 psid
 Contaminant: ISO Fine Test Dust Batch: 5256F
 Volume of housing with filter: 0.8 L
 Description of Sample: Element 135-05-1501(0.9 micron element) in FS2500 housing
 Date Received: 3/27/07 Sample Source: Filtration Soutlions

135-05-1501 (0.9 micron element)

Time,min	DP psid	Port	Particles/120 ml at:(in microns)							
			3-5	5-10	10-15	15-20	20-30	30-40	40-50	>50
3	50.2	Upstream	5999844	2753613	525460	185008	85893	20855	6396	1720
		Downstream	1430	611	173	82	38	3	2	0
		Efficiency	>99.9	>99.9	>99.9	>99.9	>99.9	>99.9	>99.9	>99.9
6	50.6	Upstream	1615349	789910	125453	44290	19404	5429	1451	323
		Downstream	905	455	147	74	35	10	0	0
		Efficiency	99.9	99.9	99.9	99.8	99.8	99.8	>99.9	>99
12	51.0	Upstream	53195	25214	5398	2316	1190	314	110	47
		Downstream	452	216	56	28	14	0	0	0
		Efficiency	99.2	99.1	99.0	98.8	98.8	>99	>99	Note 1
20	51.0	Upstream	15563	7825	1703	702	389	116	45	23
		Downstream	224	127	30	9	3	0	0	0
		Efficiency	98.6	98.4	98.2	99	99	>99	See Note 1	
30	51.2	Upstream	11308	5306	1070	480	248	58	22	10
		Downstream	252	134	40	16	11	3	0	0
		Efficiency	97.8	97.5	96.3	97	96	See Note 1		
40	51.2	Upstream	8810	4192	903	400	229	82	28	<10
		Downstream	220	124	31	15	6	2	0	0
		Efficiency	97.5	97.0	96.6	96	97	See Note 1		
50	51.2	Upstream	6439	3209	822	414	256	82	30	10
		Downstream	160	84	23	12	7	2	0	0
		Efficiency	97.5	97.4	97.2	97	97	See Note 1		
60	51.2	Upstream	5658	3008	764	321	157	46	17	<10
		Downstream	188	87	20	10	4	0	0	0
		Efficiency	96.7	97.1	97.4	97	97	See Note 1		

Note 1: Uptream too low for accurate calculation of efficienc;

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

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Performed By: KWH

Data Location: KWH#28

Reviewed By:

 Susan H. Goldsmith, Director of Technical Services

IBR 11599 Morrissey Rd Grass Lake MI USA 49240 Phone 517-522-8453 Fax 517-522-369



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 Fluid: MIL H-5606 Temperature:40C
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 Contaminant: ISO Fine Test Dust Batch: 5256F
 Volume of housing with filter: 0.8 L
 Description of Sample: Element 135-05-1406 (6 wrap element) in FS2500 housing
 Date Received: 3/27/07 Sample Source: Filtration Soutlions

135-05-1406 (6 wrap element)

Time,min	DP psid	Port	Particles/120 ml at:(in microns)							
			3-5	5-10	10-15	15-20	20-30	30-40	40-50	>50
3	66.7	Upstream	7471519	3281061	573943	210109	97234	22253	6611	2204
		Downstream	766	476	211	115	62	29	15	10
		Efficiency	>99.9	>99.9	>99.9	99.9	99.9	99.9	99.8	99.5
6	66.9	Upstream	3462683	1479146	259398	92020	42140	9836	2526	1129
		Downstream	894	552	225	90	55	27	17	7
		Efficiency	>99.9	>99.9	99.9	99.9	99.9	99.7	99.3	99.4
12	67.0	Upstream	324121	148379	27480	10179	4839	1153	370	114
		Downstream	318	152	34	12	2	0	0	0
		Efficiency	99.9	99.9	99.9	99.9	>99.9	>99.9	>99	>99
20	67.4	Upstream	64333	29898	5968	2349	1138	324	121	46
		Downstream	87	44	12	2	2	0	0	0
		Efficiency	99.9	99.9	99.8	99.9	99.8	>99	>99	Note 1
30	67.4	Upstream	26975	13285	2636	973	463	117	52	14
		Downstream	320	224	49	8	0	0	0	0
		Efficiency	98.8	98.3	98.1	99.2	>99	>99	See Note 1	
40	67.5	Upstream	16010	7528	1305	420	181	48	18	<10
		Downstream	217	119	15	2	1	0	0	0
		Efficiency	98.6	98.4	98.9	99.5	>99	See Note 1		
50	67.8	Upstream	11174	5168	829	275	116	28	12	<10
		Downstream	224	110	15	4	2	0	0	0
		Efficiency	98.0	97.9	98.2	98.5	98	See Note 1		
60	67.8	Upstream	8473	3785	609	231	100	40	11	<10
		Downstream	126	73	15	5	3	0	0	0
		Efficiency	98.5	98.1	97.5	97.8	97.0	See Note 1		

Note 1: Uptream too low for accurate calculation of efficiencj

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 Fluid: MIL H-5606 Temperature:40C
 Initial pressure drop: 50 psid
 Contaminant: ISO Fine Test Dust Batch: 5256F
 Volume of housing with filter: 0.8 L
 Description of Sample: Element 135-05-2005XL (2006 Dodge prototype element) in FS2500 housing
 Date Received: 3/27/07 Sample Source: Filtration Soutlions

135-05-2005XL (2006 Dodge prototype element)

Time,min	DP psid	Port	Particles/120 ml at:(in microns)							
			3-5	5-10	10-15	15-20	20-30	30-40	40-50	>50
3	67.1	Upstream	7046066	3017052	522364	184384	83592	22102	6106	1720
		Downstream	616	352	149	74	48	24	16	11
		Efficiency	>99.9	>99.9	>99.9	>99.9	99.9	99.9	99.7	99.3
6	67.3	Upstream	1574558	676390	129129	48719	23236	5853	2069	414
		Downstream	274	152	58	31	20	9	4.4	3
		Efficiency	>99.9	>99.9	>99.9	99.9	99.9	99.8	99.8	99
12	68.7	Upstream	274641	126271	24591	9238	4432	1173	379	132
		Downstream	223	135	50	16	5	0	0	0
		Efficiency	99.9	99.9	99.8	99.8	99.9	>99.9	>99	>99
20	69.4	Upstream	50897	24780	5015	1967	963	260	93	30
		Downstream	833	507	74	24	9	2	0	0
		Efficiency	98.4	98.0	98.5	98.8	99.1	99	See Note 1	
30	70.9	Upstream	21563	10492	2073	745	337	73	32	13
		Downstream	283	136	28	11	7	0	0	0
		Efficiency	98.7	98.7	98.6	99	98	See Note 1		
40	71.0	Upstream	14910	7280	1416	481	220	72	34	14
		Downstream	176	74	17	5	0	0	0	0
		Efficiency	98.8	99.0	98.8	99	>99	See Note 1		
50	71.2	Upstream	11865	5475	880	305	120	34	12	<10
		Downstream	153	80	13	3	2	0	0	0
		Efficiency	98.7	98.5	98.5	99	98	See Note 1		
60	71.2	Upstream	10287	4795	790	233	98	33	12	<10
		Downstream	133	74	13	6	3	1	0	0
		Efficiency	98.7	98.5	98	97	97	See Note 1		

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