



Professional Service Industries, Inc.

REPORT OF: Comparative Analysis on
Metro Bus Air Filters

Project No. 06-712
Laboratory No. SPT-40083
March 22, 1994

REPORT TO: Professional Service Industries, Inc.
7400 Third Avenue South
Seattle, WA 98108
Attention: Mr. Steve Schweyen

GENERAL

The Special Test Department of PSI received four (4) cylindrical shaped air filters from the Seattle Division of PSI. A comparison was made between each filter's air flow characteristics which were labeled as follows.

- | | |
|---------------|---------------|
| 1) New | 3) Recycle 2X |
| 2) Recycle 1X | 4) Recycle 3X |

TEST PROCEDURE

Each filter was securely mounted to a wood chamber with its opening mounted over an opening in the chamber. Also attached to the chamber was controlled blower/air metering system and a water manometer. The blower was set for specific air flows which were held constant and the water manometer indicated the pressure difference in the chamber. The filters which allow more air to pass through it will produce less pressure buildup in the chamber as does a filter that has a reduced air flow.


Comparative Analysis on Metro Bus Air Filters

TEST RESULTS

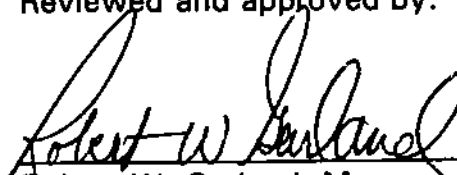
Air Flow (cfm)	CHAMBER PRESSURE (INCHES OF WATER)			
	NEW	RECYCLE 1X	RECYCLE 2X	RECYCLE 3X
0	--	--	--	--
10	.02	.03	.03	.03
20	.03	.04	.04	.05
30	.04	.05	.06	.06
40	.06	.07	.08	.08
50	.08	.09	.10	.11
92	.14	.14	.16	.16
209	.55	.45	.54	.54
323	1.30	1.02	1.26	1.16
398	1.96	1.58	1.80	1.75
466	2.70	2.24	2.45	2.32
596	4.20	3.60	4.20	3.65

Graphs for each filter can be found in Appendix I.

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