

FILE NAME: Paccar (PAC)

DATE: 1976 Aug 23

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DOCUMENT DESCRIPTION: Sample Data Sheet with analysis of particulate, fumes & mists at Paccar, Bellevue WA [Ex. K]

EXHIBIT K

SAMPLE DATA SHEET - PARTICULATE, FUMES, AND MISTS

PACCAR Inc
777 105th Avenue N.E.

M. J. KING

Date 8/23/76

Visit By D.A. BISSONNETTE

Analytical No. _____

Branch MANAGER

Bellevue, Washington 98004

Location TRUCK CENTER, EDMONTON, ALB. Contact (D.A. BISSONNETTE)

Title (CORPORATE IND. HYGIENIST (PACCAR))

Altitude _____ Feet Temperature 58° - 54° F (12° °F) Bar. Pressure _____ "Hg

Field No	Lab No	Name, SSN, Remarks	Pump No	Time Start Stop	Sample Rate lpm	Filter Type
1		ARNOLD SCHILLINGS, REPLACING BRAKE SHOES	4763	12:39 14:27	(1.6 lpm)	0.8μ
		SOUTHEAST BAY				
2		RUDY ABMA, REPLACING CLUTCH NORTHWEST	4756	12:52 14:29	(1.6 lpm)	0.8μ
		SOUTHWEST - CENTRAL BAY (NOTE: CLUTCH ONLY				
		ONE - TWO WEEKS OLD).				
3		HERMAN REHRING, ELECTRICAL MECHANIC	4756	14:39 16:18	(1.6 lpm)	
		(SIMILAR TO WORK PERFORMED BY JOSEPH				
		"VERN" [REDACTED])				

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UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

School of Public Health and Community Medicine
Department of Environmental Health, SC-34

September 27, 1976

Mr. David Bissonnette
Corporate Industrial Hygienist
PACCAR, Inc.
777 - 106th N. E.
Bellevue, WA 98004

Dear David:

A number of samples were submitted to our laboratory for analysis of specific components. In the table below is shown the kinds of analyses performed:

<u>Location</u>	<u>Number of Samples</u>	<u>Type of Samples</u>	<u>Description</u>	<u>Indicated Analyses</u>
Kenworth, Kansas City	3	37 mm membrane filters	steel grinding (2) fiberglass grinding (1)	total weight aluminum cobalt phenolics fiber count
PACCAR Truck Center Edmonton, Alberta	3	37 mm membrane filter	brake and clutch repair	asbestos
PACCAR Truck Center Edmonton, Alberba	1	bulk solvent	N/A	solvents
Kenworth, Seattle	2	carbon tubes	cab wash	solvents

Methods:

1. Kenworth, Kansas City

- a) Aluminum and cobalt were determined by X-ray fluorescence spectrometry. Total weight was ascertained on a Cahn Electrobalance. For total phenolics a modification of the impinger method was used where 1/2 of the filter was immersed in 10 cc of 1% Na₂CO₃ in an ultrasonic bath for 1 hour. Following this treatment the Na₂CO₃ solution was extracted 3 x 25 cc with ether which was evaporated to a volume of 2 cc. The ether extract was injected into a gas chromatograph using

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a Carbowax 20M column. Ether extracts were also run on the infrared spectrophotometer to estimate the phenolic content of the sample.

- b) Fiber counts were obtained microscopically using a Leitz phase contrast instrument and following the standard NPOSH procedure (copy of procedure available upon request). Chemical identify was established by electron microscopy of individual fibers and microprobe analysis of the metal constituents

2. PACCAR Truck Centre, Edmonton, Alberta

- a) Fiber counts were made using the same method indicated in 1(b)

3. Kenworth, Seattle

- a) Carbon tubes were desorbed in 1 ml of carbon disulfide, left overnight and analyzed the next morning by injection in a gas chromatograph equipped with flame ionization detector and a Chromosorb 101 column. By mass spectrometry the identity of the solvent vapors was determined, appropriate standards were prepared and the samples reanalyzed for quantification.

Results are shown in the following table:

Kenworth, Kansas City

<u>Sample Number</u>	<u>Analysis for</u>	<u>Weight Found in Sample (mg)</u>	<u>Set</u>
A	Total Weight	3.03	6/1/77
	Aluminum oxide	0.52	
	Cobalt	N.D. + (a)	
	Phenolic Resins	0.09	
	Total weight	2.01	
B	Aluminum oxide	0.16	6/1/77
	Cobalt	N.D. (a)	
	Phenolic resins	0.14	
	Glass fibers (total)	378,000	
C (b)	Total weight	3.06	6/1/77

PACCAR Truck Centre, Edmonton, Alberta

1. (Arnold Schilling)	Asbestos fibers	Not detectible
2. (Rudy Abma)	Asbestos fibers (total)	193,500 (c)
3. (Herman Rehring)	Asbestos fibers	Not detectible
4. (Control) (d)	Asbestos fibers	Not detectible
5. Varsol #5	Solvents	All solvents are aliphatic naphtha hydrocarbons

Kenworth, Seattle

1. (Virge Burke) Cab wash	Total hydrocarbons (e)	4.80
	Toluene	2.94
	Xylene	0.46
	Methanol	Trace (<0.01)
	No MEK, acetone or higher alcohols were found	
2. (Alice Manolis)	Total hydrocarbons (e)	8.17
	Toluene	5.29
	Xylene	2.12
	Menthanol	Trace (<0.01)

- (a) Not detectible - most of the metallic particulate was iron
- (b) As filter held excessive sample for microscopic counting, particulate was ultrasonically removed and redeposited on a new filter in lower density.
- (c) As blank was grossly contaminated, a new blank from the same box of cassettes was counted.
- (d) Verified as asbestos by electron microscopy and microprobe analysis.
- (e) Measured as hexane equivalent.

David Bissonnette
PACCAR, Inc.

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If you have any questions regarding this work, please do not hesitate to call.

Sincerely,

Robert L. Schumacher

Robert L. Schumacher
Faculty Associate

RLS:r1

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