

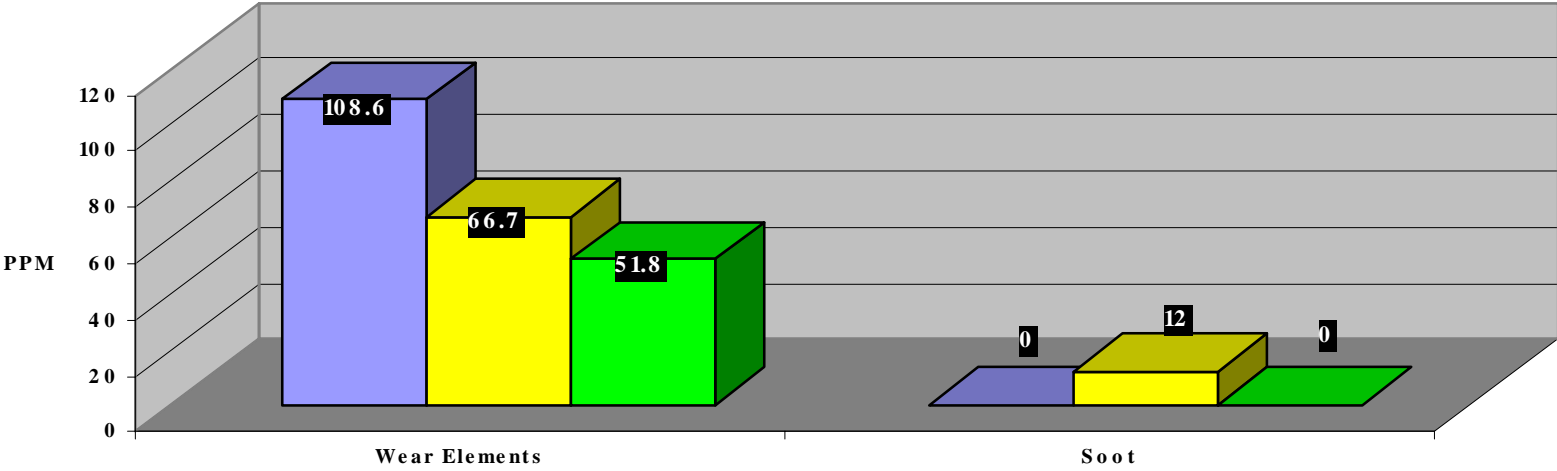
Test Protocol Overview

During 2002 Tadger operated a test protocol at York Regional Transit in partnership with the fleet services team there. Product testing was completed at Agat Laboratories through their oil analysis program. All tests were conducted under the direction of Fleet Coordinator Peter Chatoff. The testing involved oil analysis on a 2-stroke Detroit 6V53 diesel engine operating within the Region. Through a concerted team approach we have established significant data to establish the effectiveness of the Tadger on the oil life of your fleet.

This report will focus on increased oil life for your fleet from Independent testing at AGAT labs. The results have been illustrated on the attached graphs followed by a concise summary.

Additional test results for other municipalities, private industry and larger fleets is available on request or at www.tadgergroup.com

York Region Transit
Engine Oil Samples on
Detroit 6V53 - Bus # 509



- May. 13 - 2,000 km with Tadger
- Jun. 20 - 11,000 km - After 1st oil change
- Dec 9 - 55,000 km - After 5th oil change



CLIENT: 3542800

UNIT #: YRT

THE TADGER GROUP
2 PARKWOOD ROAD,
GRIMSBY ON L3M4K8

COMPONENT: ENGINE

ATTN: JOHN MOGFORD, PRESIDENT

SERIAL #: NFSN/28063

MAKE: DETROIT

DATE ANALYZED: 25-Jun-2002

MODEL: V-92

WORK ORDER: 02T16361

LOCATION:

OIL BRAND & GRADE: UNKNOWN

OAS#:

OIL PREVENTIVE MAINTENANCE

5623 McAdam Road, Mississauga, Ont L4Z 1N9
Phone: (905)501-9998 Fax: (905)501-0589
Toll Free 1-800-856-6261

* - REPORTABLE ** - CRITICAL

UNIT DATA					SPECTROGRAPHIC ANALYSIS (PPM)																					
SAMPLE#	DATE SAMPLED	COMPONENT	OIL Kms	OIL CHNG.	Al	Cr	Cu	Fe	Sn	Pb	Si	Mo	Ni	Ag	K	Na	B	Ba	Ca	Mg	Mn	P	Zn			
					Aluminum	Chromium	Copper	Iron	Tin	Lead	Silicon	Molybdenum	Nickel	Silver	Potassium	Sodium	Boron	Barium	Calcium	Magnesium	Manganese	Phosphorus	Zinc			
New Oil Not Available																										
452512	06/20/02		2000.0	N	3	1	29*	58	3	6	8	1	0	0	7	15	146	0	1180	580	1	949	1091			
PHYSICAL PROPERTIES					WEAR CONTROL CHART							OIL DEGRADATION														
SMPL#	GLY COL	% H ₂ O	% FUEL	VISCOSITY 40°C	% 100°C	0 75 150 225 300 375 450							abs/cm-1													
													SOOT	OXD	NOX	COX	SO4	ZDDP	TBN	TAN						
New Oil Not Available																										
452512	N	N	0.0	127.1	14.3	108.6							0	0	1	1	0									
ISO CLEANLINESS					Oxidation Stability	Membrane Filtration		Comments:																		
						Micron Size		REFER TO REVERSE FOR QUALITY CONTROL REPORT, EXPLANATION OF VARIANCE AND POSSIBLE CAUSES.																		
SMPL#	3		5	15	25	in Minutes		Should you wish to provide feedback to AGAT Laboratories, please access our Customer review form at www.agatlabs.com/review.htm . This input is extremely important to us because your well being and satisfaction is our number one priority.																		
452512																										

*COMPONENT SERIAL NUMBER MUST BE GIVEN TO GENERATE HISTORY. SEE REVERSE FOR EXPLANATION OF TERMS.

NOTE: Bold faced elements are included in Wear Control Chart. *Indicates abnormal level. #Indicates not analysed.



CLIENT: 3542800

THE TADGER GROUP

2 PARKWOOD ROAD,
GRIMSBY ON L3M4K8

ATTN: JOHN MOGFORD, PRESIDENT

DATE ANALYZED: 2-Jul-2002

WORK ORDER: 02T16770

OIL BRAND & GRADE: AGIP 40

UNIT #: UNIT # 509

COMPONENT: ENGINE

SERIAL #: 509

MAKE: DETROIT

MODEL: 6V53

LOCATION:

OAS#:

OIL PREVENTIVE MAINTENANCE

5623 McAdam Road, Mississauga, Ont L4Z 1N9
Phone: (905)501-9998 Fax: (905)501-0589
Toll Free 1-800-856-6261

* - REPORTABLE ** - CRITICAL

UNIT DATA					SPECTROGRAPHIC ANALYSIS (PPM)																			
SAMPLE#	DATE SAMPLED	COMPONENT Kms	OIL	OIL CHNG.	Al Aluminum	Cr Chromium	Cu Copper	Fe Iron	Sn Tin	Pb Lead	Si Silicon	Mo Molybdenum	Ni Nickel	Ag Silver	K Potassium	Na Sodium	B Boron	Ba Barium	Ca Calcium	Mg Magnesium	Mn Manganese	P Phosphorus	Zn Zinc	
New Oil					0	0	0	0	0	0	0	0	0	0	0	0	150	0	600	1000	0	1100	1200	
452511	06/17/02	24875.0		N	2	1	6	49	1	3	5	1	0	0	6	6	147	1	2100**	280**	1	917	1079	
PHYSICAL PROPERTIES					WEAR CONTROL CHART										OIL DEGRADATION									
SMPL#	GLY COL	% H ₂ O FUEL	VISCOSITY		0 25 50 75 100 125 150										abs/cm-1									
			40°C	100°C	% SOLIDS											SOOT	OXD	NOX	COX	SO4	ZDDP	TBN	TAN	
New Oil			125.0	14.5																				
452511	N	N	0.0	127.5	14.6	66.7										12	4	3	0	0				
ISO CLEANLINESS					Oxidation Stability	Membrane Filtration	Comments:																	
			MICRON SIZE		ISO CODE	in Minutes	Micron Size	REFER TO REVERSE FOR QUALITY CONTROL REPORT, EXPLANATION OF VARIANCE AND POSSIBLE CAUSES. Should you wish to provide feedback to AGAT Laboratories, please access our Customer review form at www.agatlabs.com/review.htm . This input is extremely important to us because your well being and satisfaction is our number one priority.																
SMPL#	3		5	15	25																			
452511																								

*COMPONENT SERIAL NUMBER MUST BE GIVEN TO GENERATE HISTORY. SEE REVERSE FOR EXPLANATION OF TERMS.

NOTE: Bold faced elements are included in Wear Control Chart. *Indicates abnormal level. #Indicates not analysed.



OIL PREVENTIVE MAINTENANCE

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 Phone: (905)501-9998 Fax: (905)501-0589
 Toll Free 1-800-856-6261

CLIENT: 3542800

UNIT #: UNIT # 509

THE TADGER GROUP

COMPONENT: ENGINE

2 PARKWOOD ROAD,
GRIMSBY ON L3M4K8

SERIAL #: 509

ATTN: JOHN MOGFORD, PRESIDENT

MAKE: DETROIT

DATE ANALYZED: 20-Dec-2002

MODEL: 6V53

WORK ORDER: 02T32339

LOCATION:

OIL BRAND & GRADE: AGIP 40

OAS #:

* - REPORTABLE ** - CRITICAL

UNIT DATA					SPECTROGRAPHIC ANALYSIS (PPM)																		
SAMPLE #	DATE SAMPLED	COMPONENT	OIL	OIL CHNG.	Al Aluminum	Cr Chromium	Cu Copper	Fe Iron	Sn Tin	Pb Lead	Si Silicon	Mo Molybdenum	Ni Nickel	Ag Silver	K Potassium	Na Sodium	B Boron	Ba Barium	Ca Calcium	Mg Magnesium	Mn Manganese	P Phosphorus	Zn Zinc
New Oil					0	0	0	0	0	0	0	0	0	0	0	0	150	0	600	1000	0	1100	1200
452514	12/09/02		N		3	5	3	23	3	7	9	1	1	0	5	4	92	0	2930**	354**	0	1066	1333
452511	06/17/02	24875.0	N		2	1	6	49	1	3	5	1	0	0	6	6	147	1	2100**	280**	1	917	1079

PHYSICAL PROPERTIES						WEAR CONTROL CHART						OIL DEGRADATION						
SMPL#	GLY COL	H ₂ O	% FUEL	VISCOSITY 40°C	% SOLIDS 100°C	0	25	50	75	100	125	150	abs/cm-1					
						SOOT	OXD	NOX	COX	S04	ZDDP	TBN	TAN					
New Oil																		
452514	N	N	0.0	121.2	15.7	51.8						0	7	15	18	5		
452511	N	N	0.0	127.5	14.6	66.7						12	4	3	0	0		

ISO PARTICLE COUNT					Oxidation Stability	Membrane Filtration	Comments:
SMPL#	MICRON SIZE				in Minutes	Micron Size	
	3	5	15	25			
452514							REFER TO REVERSE FOR QUALITY CONTROL REPORT, EXPLANATION OF VARIANCE AND POSSIBLE CAUSES.
452511							

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* COMPONENT SERIAL NUMBER MUST BE GIVEN TO GENERATE HISTORY. Bold faced elements are included in Wear Control Chart. # Indicates not analysed.
 AGAT Laboratories Liability Shall Not Exceed The Cost Of Analysis.

Oil Life Extension Summary:

We completed oil samples on a 6V53 engine from a bus at York Region Transit. The results from the preceding graph show:

- 1) The wear elements were reduced by 38.5% after the first oil change and 52.3% after the fifth oil change. This translates to less engine wear over time.**
- 2) The soot was initially elevated to 12 ppm after the first oil change as the Tadger was removing built up deposits in the engine. After the fifth oil change the soot was 0 ppm. This translates to less particulate matter being expelled from the exhaust and also less build up in the engine.**
- 3) Oil change frequencies may be altered which would reduce the amount of used oil being disposed of.**