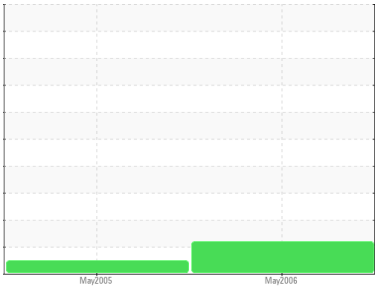
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Area
[WO#49432-1]
Machine Id
TRP DIESEL (S/N 97847-04)
Component
Diesel Engine
Fluid
PETRO CANADA 40W (35 GAL)

DIAGNOSIS

Recommendation

Check for low coolant level. We recommend an early resample to confirm this situation, however, a minimum of 10 hours, 500 miles or 800 kilometers on the oil is required before resampling to prevent false positive glycol reactions that can be experienced with new oil.

Wear

All component wear rates are normal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core)

Contamination

Water treatment chemicals present, indicating slow coolant leak.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC293041**	WC666776	---
Sample Date		Client Info		**09 May 2006**	27 May 2005	---
Machine Age	hrs	Client Info		**7378**	7297	---
Oil Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	Not Changd	---
Sample Status				**ABNORMAL**	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method		**<1.0**	<1.0	---
Water		WC Method		**NEG**	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)		**33**	26	---
Chromium	ppm	ASTM D5185(m)		**1**	<1	---
Nickel	ppm	ASTM D5185(m)		**0**	0	---
Titanium	ppm	ASTM D5185(m)		**<1**	<1	---
Silver	ppm	ASTM D5185(m)		**<1**	0	---
Aluminum	ppm	ASTM D5185(m)		**2**	1	---
Lead	ppm	ASTM D5185(m)		**13**	16	---
Copper	ppm	ASTM D5185(m)		▲ **327**	▲ 352	---
Tin	ppm	ASTM D5185(m)		**4**	2	---
Vanadium	ppm	ASTM D5185(m)		**0**	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**3**	6	---
Barium	ppm	ASTM D5185(m)		**<1**	<1	---
Molybdenum	ppm	ASTM D5185(m)		**3**	3	---
Manganese	ppm	ASTM D5185(m)		**<1**	<1	---
Magnesium	ppm	ASTM D5185(m)		**32**	44	---
Calcium	ppm	ASTM D5185(m)		**2348**	2288	---
Phosphorus	ppm	ASTM D5185(m)		**888**	870	---
Zinc	ppm	ASTM D5185(m)		**987**	894	---
Sulfur	ppm	ASTM D5185(m)		**4050**	3787	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)		**4**	4	---
Sodium	ppm	ASTM D5185(m)		**31**	▲ 41	---
Potassium	ppm	ASTM D5185(m)		▲ **32**	▲ 43	---
Glycol	%	ASTM D7922*		**0.0**	▲ 0.0	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0.1**	0	---
Nitration	Abs/cm	ASTM D7624*		**6**	5	---
Sulfation	Abs/.1mm	ASTM D7415*		**23**	25	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		**14**	15	---
Base Number (BN)	mg KOH/g	ASTM D2896*		**2.82**	---	---

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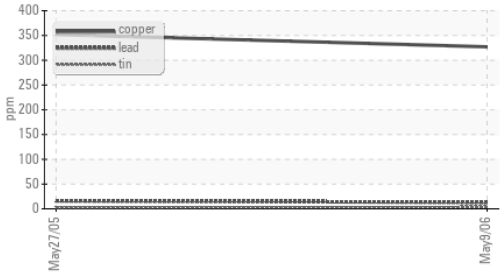
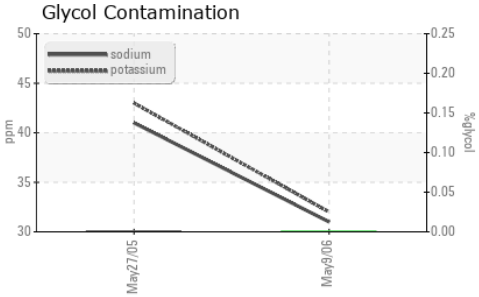
Non-ferrous Metals

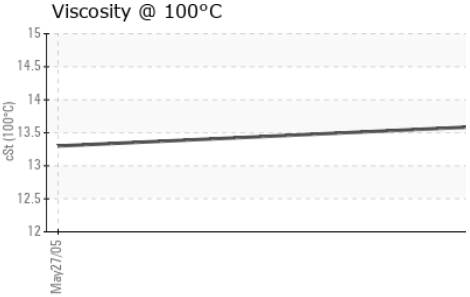


Glycol Contamination



Base Number

Viscosity @ 100°C

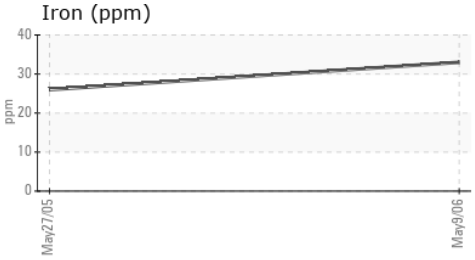


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	---
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	---
Silt	scalar	Visual*	NONE	**NONE**	NONE	---
Debris	scalar	Visual*	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	---
Appearance	scalar	Visual*	NORML	**NORML**	NORML	---
Odor	scalar	Visual*	NORML	**NORML**	NORML	---
Emulsified Water	scalar	Visual*		**NEG**	NEG	---
Free Water	scalar	Visual*		**NEG**	NEG	---

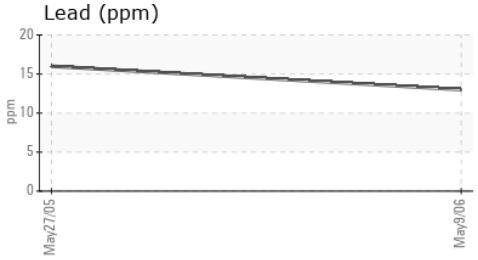
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)		**13.6**	13.3	---

GRAPHS

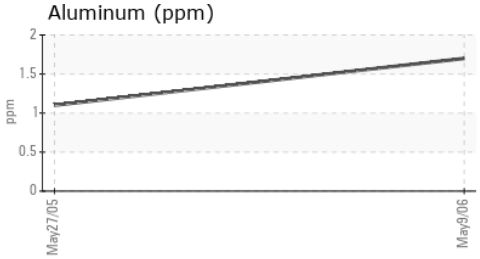
Iron (ppm)



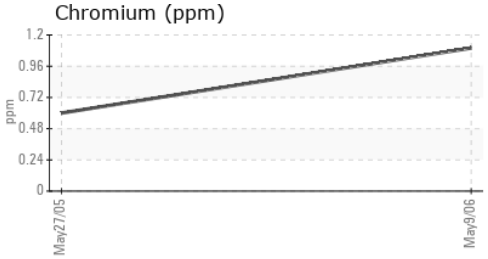
Lead (ppm)



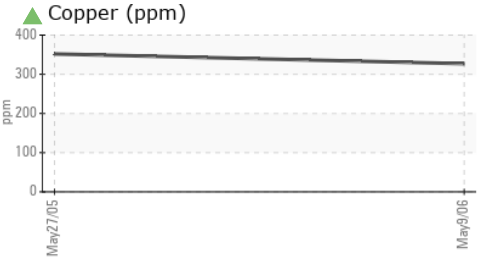
Aluminum (ppm)



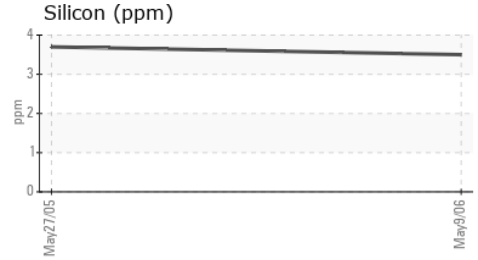
Chromium (ppm)



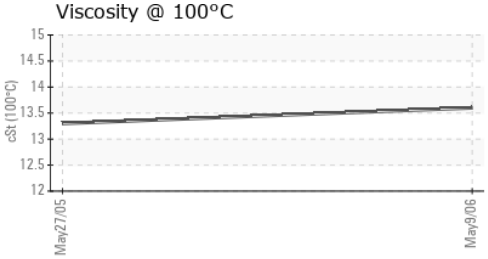
Copper (ppm)



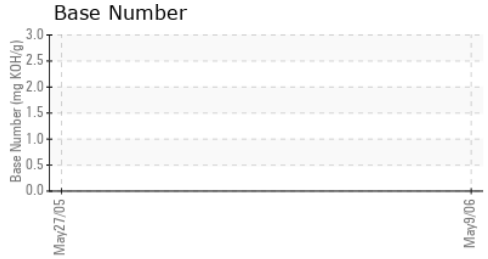
Silicon (ppm)



Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC293041 **Recieved** : 18 May 2006
Lab Number : 01298943 **Diagnosed** : 19 May 2006
Unique Number : 2229259 **Diagnostician** :
Test Package : MOB 2 (Additional Tests: Glycol, SCREEN)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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