



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER CASCADIA 2016 18-INNT-01-038-M (S/N 1FUJGLCK681Y46697)

Component
DETROIT DD15 Front Diesel Engine

Fluid
MOBIL 15W40 (40 LTR)

PRODUIT : ZP-700 ADDITIF MOTEUR - Cas d'étude #14-a / 1 de 1



RECOMMENDATION

Resample at the next service interval to monitor.

Commentaires : L'unité est affectée au service long courrier.
History1 vs Current : Oil age / Age de l'huile.
History1 : 41632 km, l'huile est acceptable, à la limite, doit être changée.
Current : 67258 km, l'huile a atteint la limite de vie utile acceptable.
NOTE : Les 2 L de ZP-700 ont été ajoutés à l'huile (5%) après la prise d'échantillon d'huile à 41632 km.

Texte & Soulignement en bleu par Adrenalube

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number				WC113943	WC113761	WC112678
Sample Date				04 Feb 2019	10 Oct 2018	26 Jul 2018
Machine Age	kms			827037	759779	718147
Oil Age	kms			67258	41632	20000
Filter Age	kms			67258	41632	20000
Oil Changed				Changed	Not Changed	Not Changed
Filter Changed				Changed	Not Changed	Not Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

History1 : Taux d'usures et concentration des métaux d'usures acceptable

Iron	ppm	ASTM D5185	>69	24	21	7
Chromium	ppm	ASTM D5185	>6	2	<1	<1
Nickel	ppm	ASTM D5185	>3	<1	<1	<1
Titanium	ppm	ASTM D5185		<1	0	0
Silver	ppm	ASTM D5185		0	0	0
Aluminum	ppm	ASTM D5185	>53	12	5	2
Lead	ppm	ASTM D5185	>11	<1	<1	0
Copper	ppm	ASTM D5185	>388	2	3	1
Tin	ppm	ASTM D5185	>6	0	0	0
Vanadium	ppm	ASTM D5185		<1	0	0

CONTAMINATION

There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185	>12	8	7	5
Potassium	ppm	ASTM D5185	>20	2	8	7
Fuel		ASTM D3524	>3.0	<1.0	<1.0	<1.0
Glycol		ASTM D2982		NEG	NEG	NEG
Soot %	%	ASTM D7686	>3	0.7	1.1	0.4
Nitration	Abs/cm	ASTM D7624	>20	11.7	11.9	9.2
Sulfation	Abs/.1mm	ASTM D7415	>30	25.4	29.6	23.3
Emulsified Water	scalar	Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

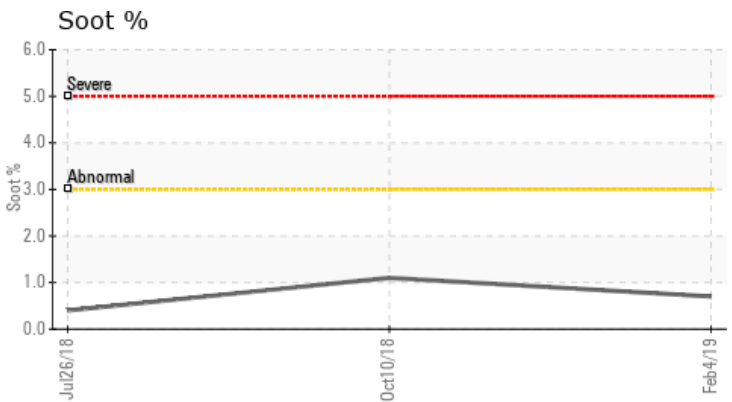
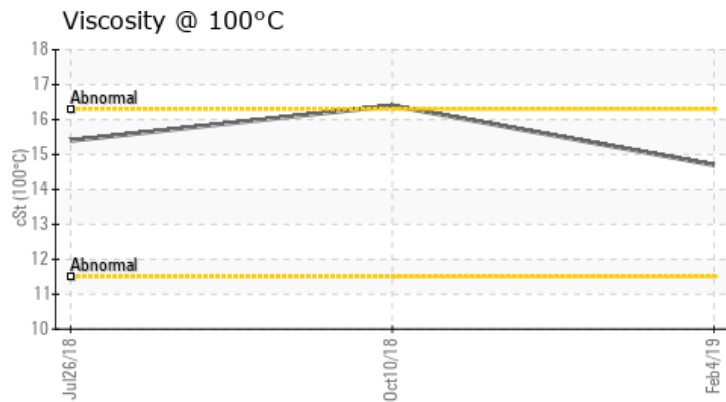
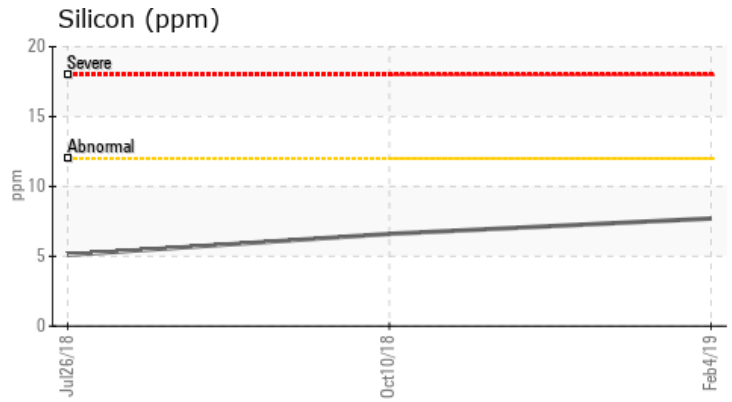
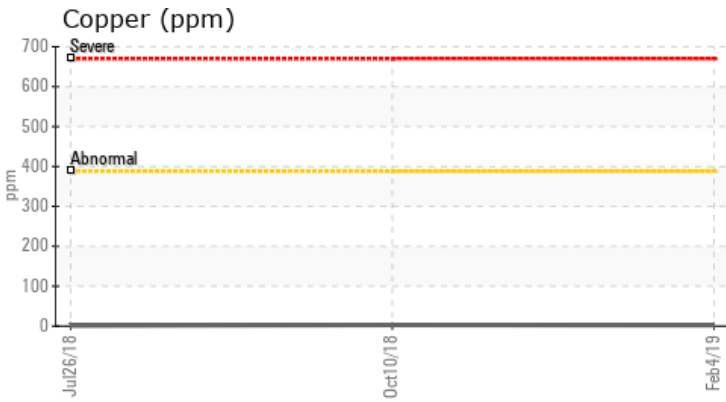
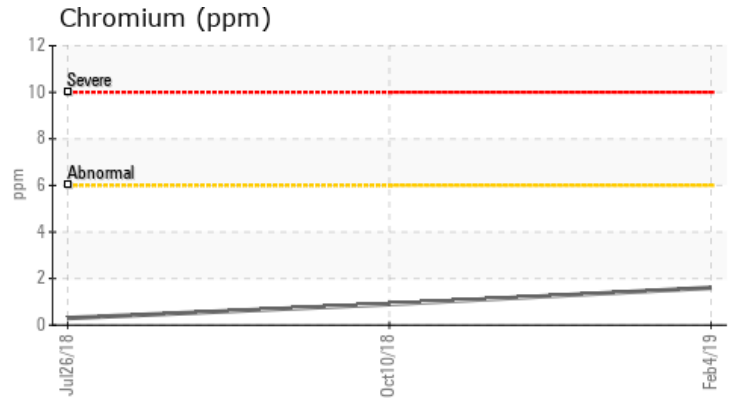
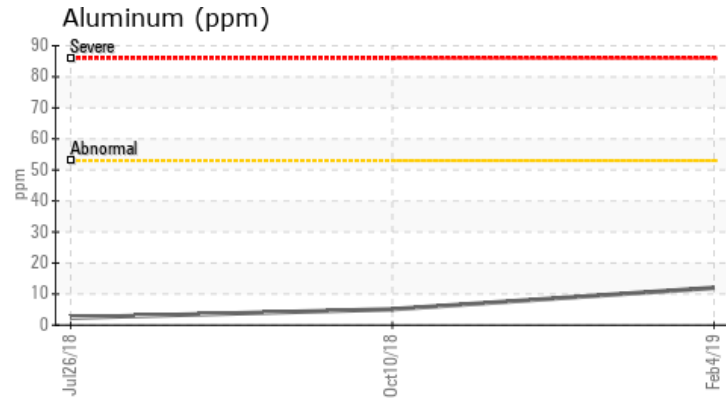
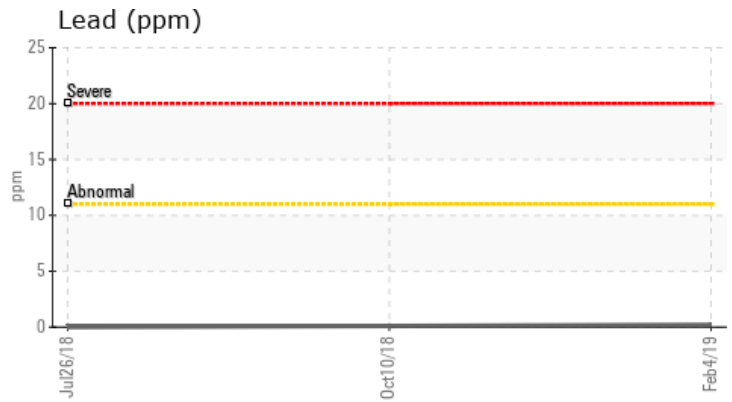
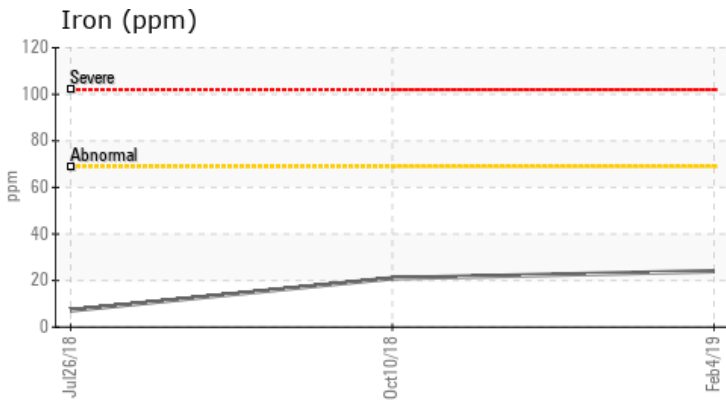
The condition of the oil is acceptable for the time in service.

History1 : Condition de l'huile acceptable, à la limite pour la viscosité, l'oxydation et la sulfatation. Il y a un peu de suie.
L'huile n'a pas été changée.

NOTE:

Current : Le client à poursuivi sans changée l'huile comme suggéré.
Le fait d'ajouté le ZP-700 à 41632 km a favorisé l'amélioration de la condition de l'huile au niveau de la suie, la nitration, la sulfatation, l'oxydation et la viscosité.

Sodium	ppm	ASTM D5185	>118	12	6	2
Boron	ppm	ASTM D5185		45	22	90
Barium	ppm	ASTM D5185		0	0	0
Molybdenum	ppm	ASTM D5185		71	27	27
Manganese	ppm	ASTM D5185		<1	<1	<1
Magnesium	ppm	ASTM D5185		467	90	86
Calcium	ppm	ASTM D5185		1771	2264	2170
Phosphorus	ppm	ASTM D5185		748	903	991
Zinc	ppm	ASTM D5185		916	1187	1141
Sulfur	ppm	ASTM D5185		2128	2757	2929
Oxidation	Abs/.1mm	ASTM D7414	>25	25.5	25.9	19.1
Visc @ 100°C	cSt	ASTM D7279		14.7	16.4	15.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC113943 **Received** : 08 Feb 2019
Lab Number : 02266816 **Diagnosed** : 08 Feb 2019
Unique Number : 4822047 **Diagnostician** : Kevin Marson
Test Package : MOB 1

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 To change component or sample information, contact Customer Service at 1-800-268-2131.