



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
MACK CL713 18-SIMP-01-001-M (S/N OY2214)
Component
Front Diesel Engine
Fluid
SHELL ROTELLA T4 15W40 (36 LTR)



PRODUIT : ZP-700 ADDITIF MOTEUR - Cas d'étude #13-a / 2de4

RECOMMENDATION

Texte & Soulignement en bleu par Adrenalube

We recommend that you drain the oil from the component if this has not already been done. No other corrective action is recommended at this time.

Commentaires :

Ce camion dompeur (12 roues), terre, pierre, neige.

History1 - Current : L'huile a été changée.

Routine des changements d'huile, maintenant 500 h.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number				WC0355045	WC113765	WC113351
Sample Date				12 Jul 2019	30 Nov 2018	11 Oct 2018
Machine Age	hrs			5894	5378	5540
Oil Age	hrs			516	578	425
Filter Age	hrs			516	578	425
Oil Changed				Not Changed	Changed	Not Changed
Filter Changed				Not Changed	Changed	Not Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185	>120	44	41	20
Chromium	ppm	ASTM D5185	>20	<1	<1	<1
Nickel	ppm	ASTM D5185	>5	<1	<1	0
Titanium	ppm	ASTM D5185	>2	0	0	0
Silver	ppm	ASTM D5185	>2	0	0	0
Aluminum	ppm	ASTM D5185	>20	1	1	1
Lead	ppm	ASTM D5185	>40	9	10	3
Copper	ppm	ASTM D5185	>330	5	3	3
Tin	ppm	ASTM D5185	>15	<1	<1	0
Vanadium	ppm	ASTM D5185		0	0	0

CONTAMINATION

Light fuel dilution occurring. Light concentration of carbon/soot present in the oil. Test for glycol is negative. No other contaminants were detected in the oil.

History1 : L'huile a été changée. On ne devrait plus avoir de présence de glycol.

Current : Contamination externe acceptable. Légère présence de carburant dans l'huile et contamination par la suie. Sulfatation légèrement élevée.

Silicon	ppm	ASTM D5185	>25	5	6	3
Potassium	ppm	ASTM D5185	>20	40	▲ 29	▲ 20
Fuel	%	ASTM D3524	>3.0	2.4	<1.0	<1.0
Glycol	%	ASTM D2982		0.0	▲ 0.011	▲ 0.015
Soot %	%	ASTM D7686	>4	▲ 4.6	2.9	2.3
Nitration	Abs/cm	ASTM D7624	>20	14.1	12.0	10.2
Sulfation	Abs/.1mm	ASTM D7415	>30	35.1	29.1	26.0
Emulsified Water	scalar	Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

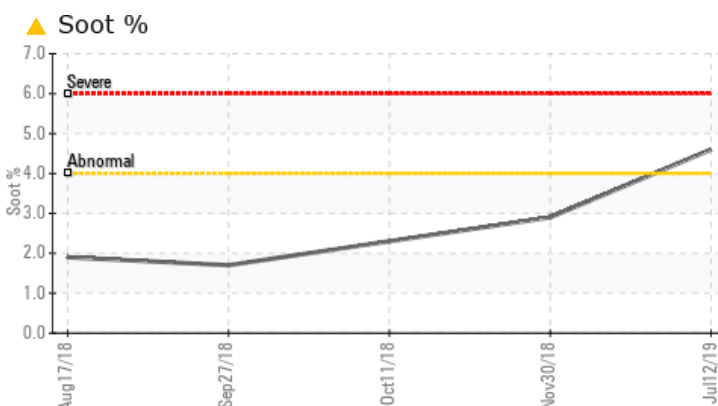
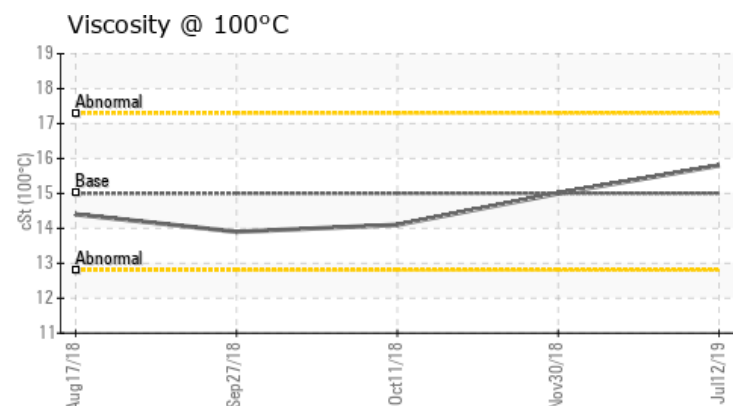
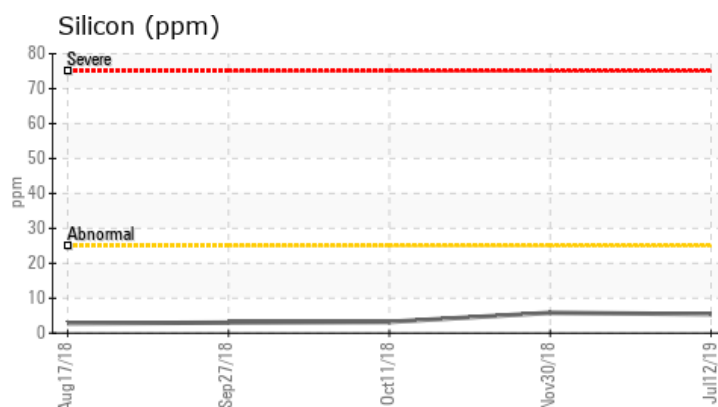
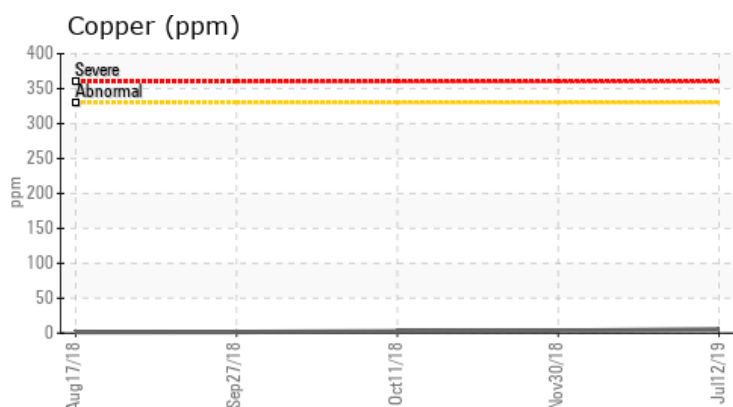
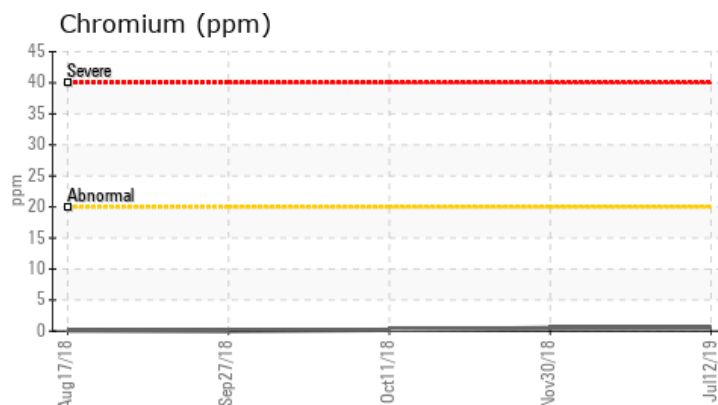
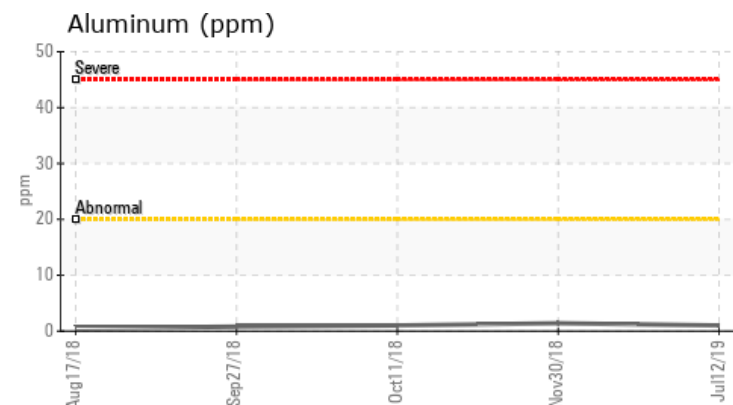
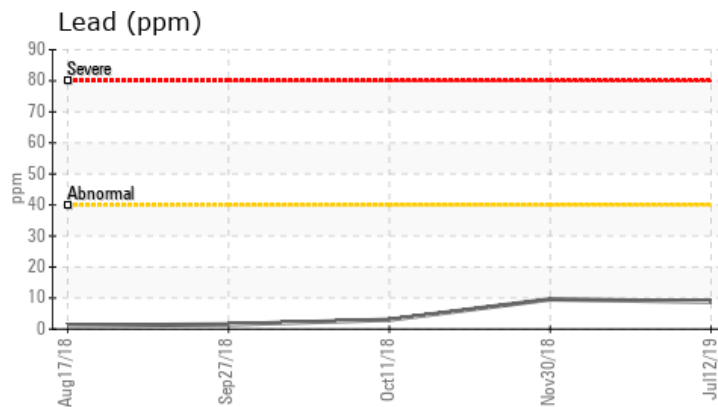
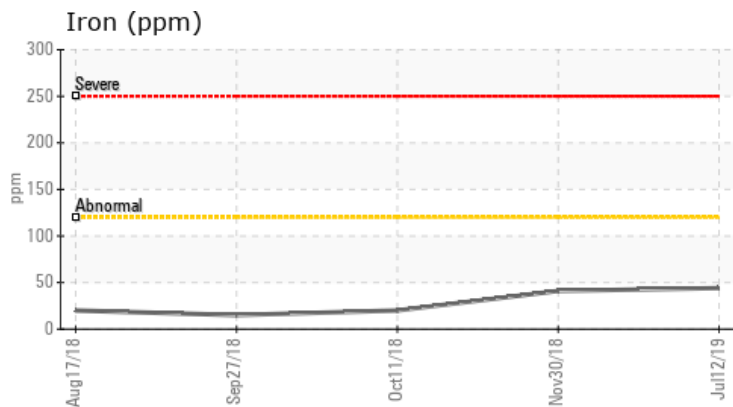
The oil is no longer serviceable due to the presence of contaminants.

Contamination dues aux conditions d'opération (ralentis excessifs, basses vitesses...)

Changez l'huile pour éliminer la contamination.

Échantillonner de nouveau dans 500h.

Sodium	ppm	ASTM D5185		33	▲ 77	▲ 49
Boron	ppm	ASTM D5185		27	33	53
Barium	ppm	ASTM D5185		0	0	0
Molybdenum	ppm	ASTM D5185		8	11	10
Manganese	ppm	ASTM D5185		<1	<1	<1
Magnesium	ppm	ASTM D5185		11	11	12
Calcium	ppm	ASTM D5185		2149	2196	2087
Phosphorus	ppm	ASTM D5185		918	919	880
Zinc	ppm	ASTM D5185		1146	1120	1091
Sulfur	ppm	ASTM D5185		2782	2854	2808
Oxidation	Abs/.1mm	ASTM D7414	>25	22.7	21.4	18.3
Visc @ 100°C	cSt	ASTM D7279	15	15.8	15.0	14.1



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0355045 **Received** : 22 Jul 2019
Lab Number : 02298355 **Diagnosed** : 23 Jul 2019
Unique Number : 4901628 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel)

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