



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
WESTERN STAR 5KJJAEBGXCPBL5600

Component
Diesel Engine

Fluid
TRC PRO-SPEC IV XP SYN BLEND 15W40 (43 LTR)

RECOMMENDATION

Nous avons pris note que la vidange d'huile a été effectuée au moment de l'échantillonnage. Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02633999	TR02598632	TR02600456
Sample Date		Client Info		29 Apr 2024	18 Oct 2023	11 Oct 2023
Machine Age	hrs	Client Info		17583	16434	16629
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

Usure de piston.

Iron	ppm	ASTM D5185(m)	>100	59	▲ 240	42
Chromium	ppm	ASTM D5185(m)	>20	3	9	1
Nickel	ppm	ASTM D5185(m)	>4	<1	1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	▲ 29	▲ 48	10
Lead	ppm	ASTM D5185(m)	>40	<1	6	1
Copper	ppm	ASTM D5185(m)	>330	3	6	1
Tin	ppm	ASTM D5185(m)	>15	<1	1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

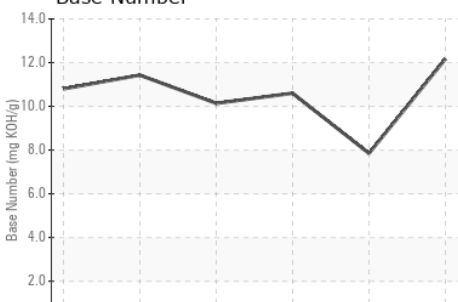
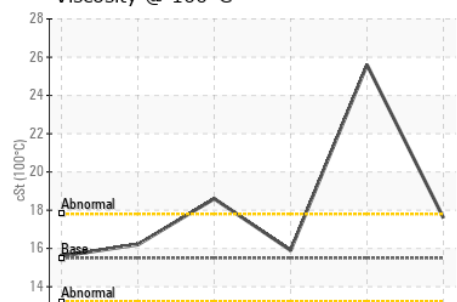
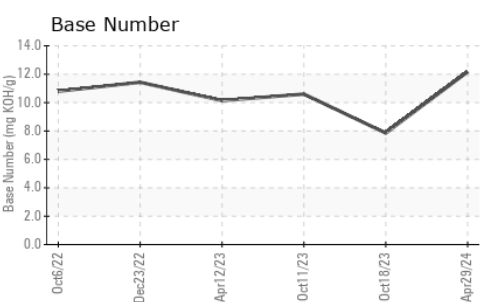
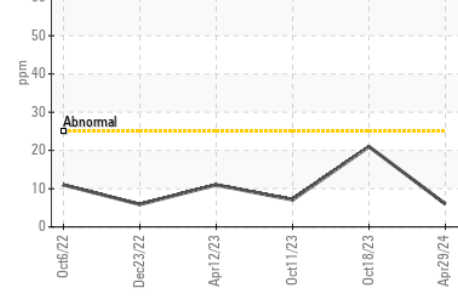
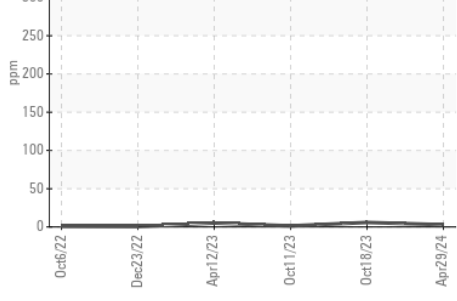
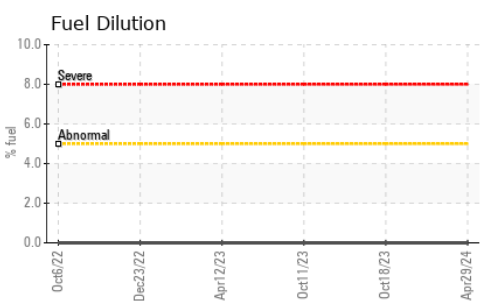
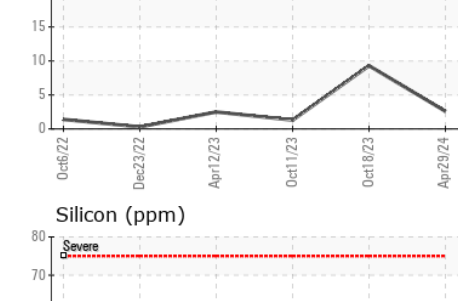
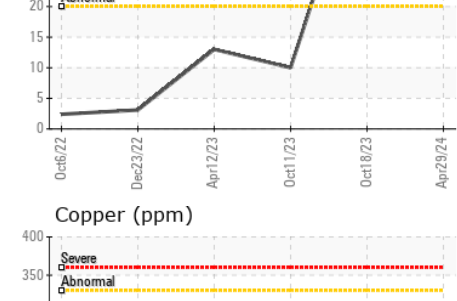
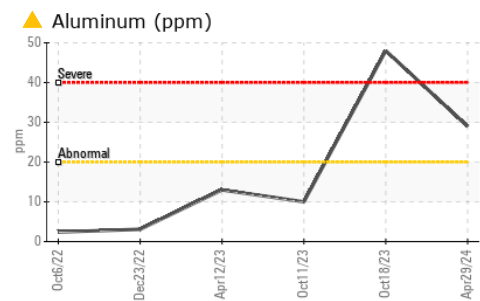
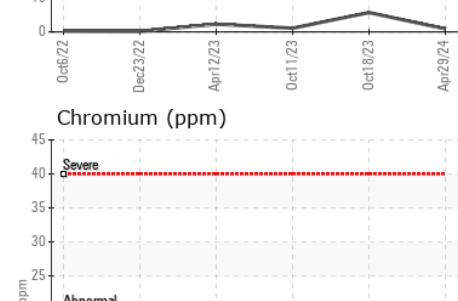
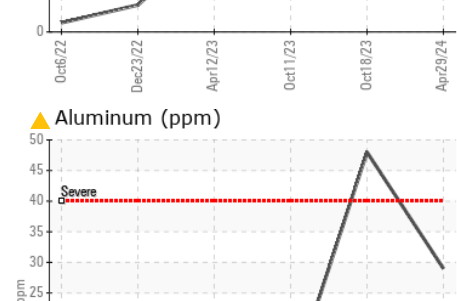
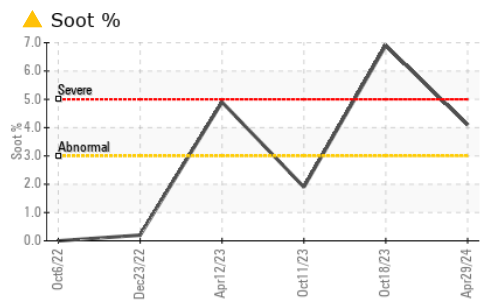
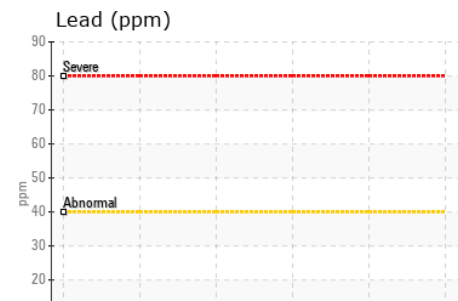
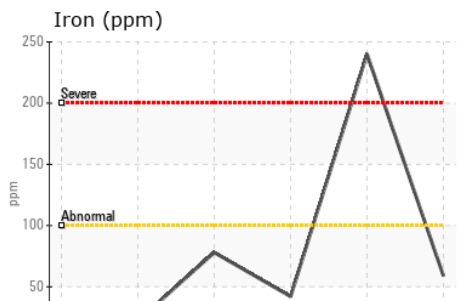
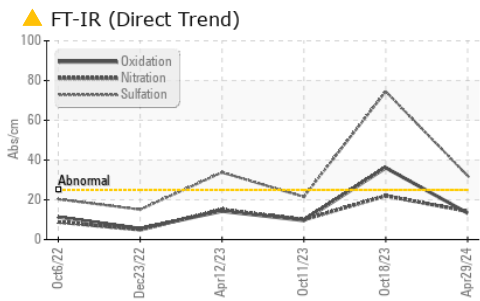
Légère concentration de carbone/suie dans l'huile. Les tests n'indiquent aucune trace de carburant dans l'huile.

Silicon	ppm	ASTM D5185(m)	>25	6	21	7
Potassium	ppm	ASTM D5185(m)	>20	2	7	2
Fuel	%	ASTM D7593*	>5	0.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	0.0	0.0
Soot %	%	ASTM D7844*	>3	▲ 4.1	▲ 6.9	1.9
Nitration	Abs/cm	ASTM D7624*	>20	14.2	22.0	10.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	32.1	74.5	21.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	.2%

FLUID CONDITION

Le résultat pour le BN indique que la réserve d'alcalinité est acceptable pour l'huile. l'huile n'est plus en état de service en raison d'une usure anormale et/ou sévère.

Sodium	ppm	ASTM D5185(m)		7	9	3
Boron	ppm	ASTM D5185(m)		2	2	<1
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	1	<1
Manganese	ppm	ASTM D5185(m)		<1	2	0
Magnesium	ppm	ASTM D5185(m)		19	19	16
Calcium	ppm	ASTM D5185(m)		4648	4261	4039
Phosphorus	ppm	ASTM D5185(m)		899	860	846
Zinc	ppm	ASTM D5185(m)		1050	1003	948
Sulfur	ppm	ASTM D5185(m)		3314	3134	3142
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.3	36.1	9.6
Base Number (BN)	mg KOH/g	ASTM D2896*		12.17	7.85	10.60
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	17.6	▲ 25.6	15.9



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02633999 **Received** : 08 May 2024
Lab Number : 02633999 **Tested** : 09 May 2024
Unique Number : 5775152 **Diagnosed** : 09 May 2024 - Kevin Marson
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

FORESTIER GAMAX
 412 RANG DES PRES-VERTS
 QUEBEC, QC
 CA G0L 1J0
 Contact: MAXIM MORIN

To discuss this sample report, contact Customer Service at 1-800-827-0711.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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 F: