



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
52019
 Component
Diesel Engine
 Fluid
{not provided} (--- QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0025740	---	---
Sample Date		Client Info		05 Mar 2024	---	---
Machine Age	mls	Client Info		0	---	---
Oil Age	mls	Client Info		0	---	---
Filter Age	mls	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	72	---	---
Chromium	ppm	ASTM D5185m	>20	3	---	---
Nickel	ppm	ASTM D5185m	>4	1	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>3	1	---	---
Aluminum	ppm	ASTM D5185m	>20	32	---	---
Lead	ppm	ASTM D5185m	>40	9	---	---
Copper	ppm	ASTM D5185m	>330	19	---	---
Tin	ppm	ASTM D5185m	>15	7	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components.

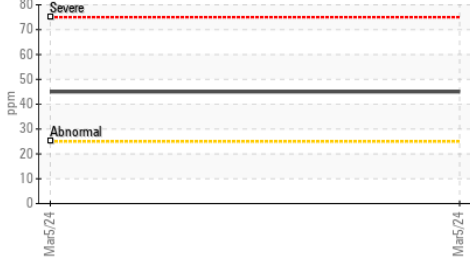
Silicon	ppm	ASTM D5185m	>25	▲ 45	---	---
Potassium	ppm	ASTM D5185m	>20	67	---	---
Fuel	%	ASTM D3524	>5	0.5	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	11.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.4	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

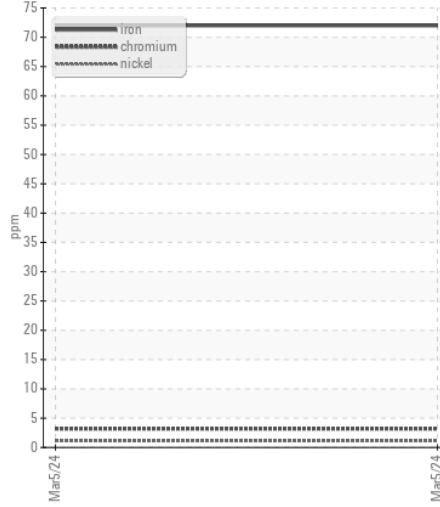
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		6	---	---
Boron	ppm	ASTM D5185m		16	---	---
Barium	ppm	ASTM D5185m		4	---	---
Molybdenum	ppm	ASTM D5185m		68	---	---
Manganese	ppm	ASTM D5185m		6	---	---
Magnesium	ppm	ASTM D5185m		474	---	---
Calcium	ppm	ASTM D5185m		1935	---	---
Phosphorus	ppm	ASTM D5185m		1013	---	---
Zinc	ppm	ASTM D5185m		1253	---	---
Sulfur	ppm	ASTM D5185m		3095	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		4.6	---	---
Visc @ 100°C	cSt	ASTM D445		11.8	---	---

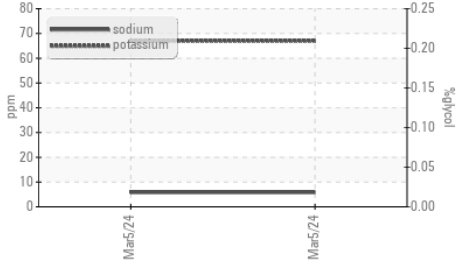
▲ Silicon (ppm)



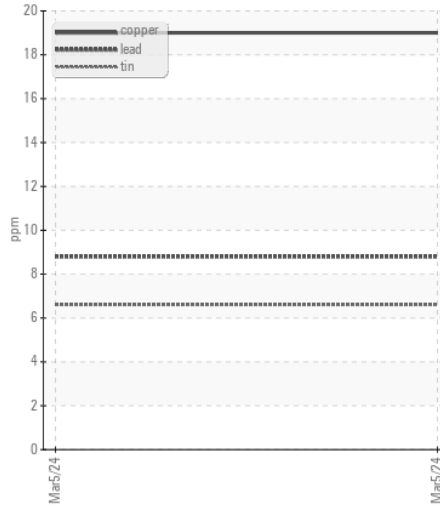
Ferrous Alloys



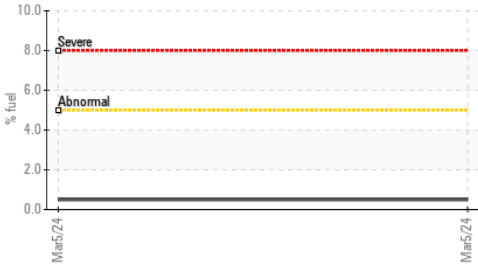
Glycol Contamination



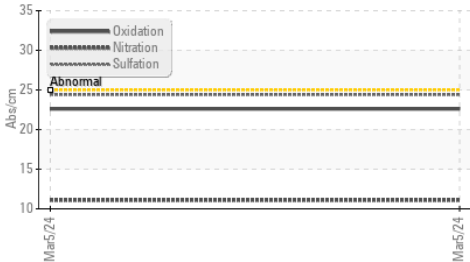
Non-ferrous Metals



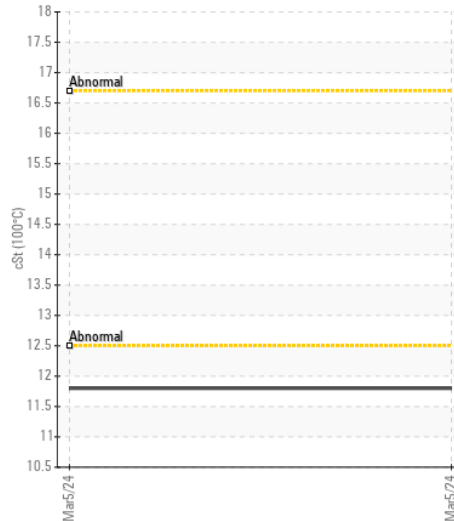
Fuel Dilution



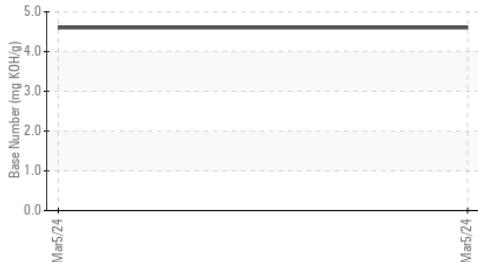
FT-IR (Direct Trend)



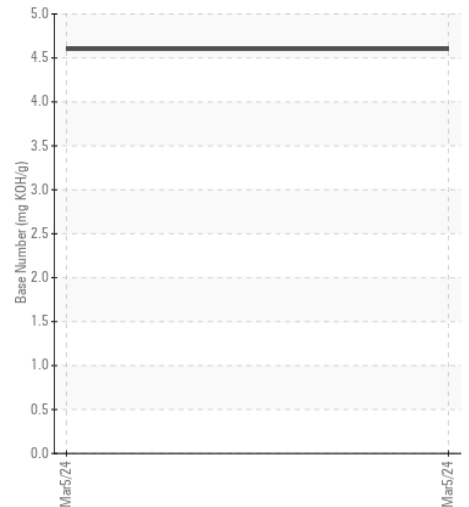
Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : IL0025740

Lab Number : 06188802

Unique Number : 11045554

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 23 May 2024

Tested : 28 May 2024

Diagnosed : 28 May 2024 - Don Baldrige

RUSH TRUCK LEASING - SPRINGFIELD IDEALEASE

3441 GATLIN DR

SPRINGFIELD, IL

US 62707

Contact: TODD CRUMPLER

crumplerc@rushenterprises.com

T: (217)718-2341

F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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)