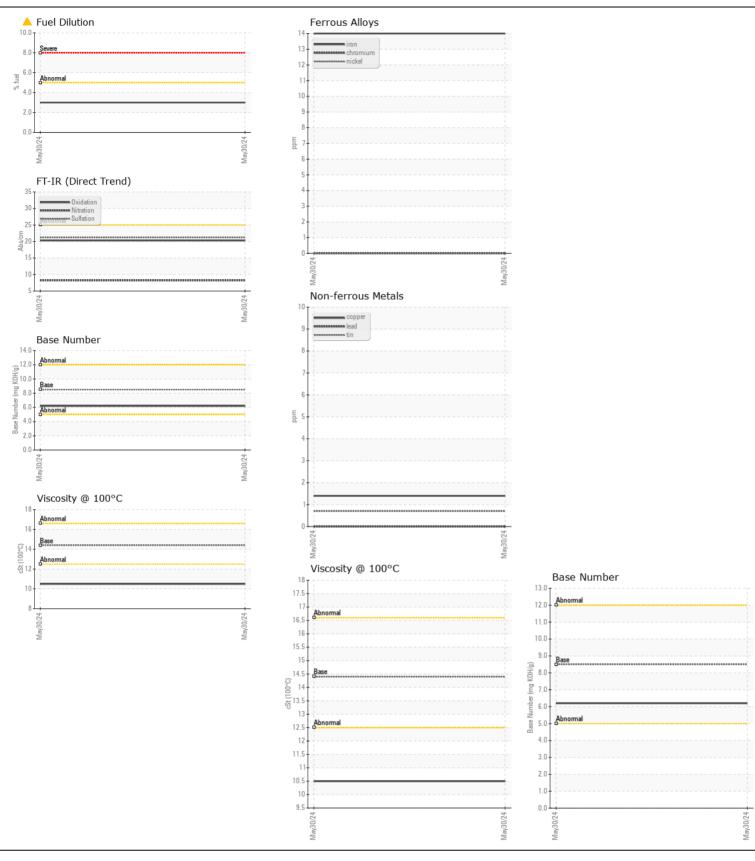


WEAR CONTAMINATION **FLUID CONDITION**

NORMAL MARGINAL NORMAL

TVK9777

Diesel Engine DIESEL ENGINE OIL SAE 40 (GAL)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
TEOOMMENDATION	Sample Number		Client Info		ARI0007670		
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.	Sample Date		Client Info		30 May 2024		
	Machine Age	mls	Client Info		71827		
	Oil Age	mls	Client Info		0		
	Filter Age	mls	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				MARGINAL		
WEAR	Iron	ppm	ASTM D5185m	>100	14		
Motal lavels are typical for a pow component breaking in	Chromium	ppm	ASTM D5185m	>20	0		
Metal levels are typical for a new component breaking in.	Nickel	ppm	ASTM D5185m	>4	0		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m	>20	3		
	Lead	ppm	ASTM D5185m		0		
	Copper	ppm	ASTM D5185m		1		
	Tin	ppm	ASTM D5185m	>15	<1		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	0:::		40TM DE40E	05	•		
CONTAMINATION	Silicon	ppm	ASTM D5185m		8		
Light fuel dilution occurring. No other contaminants were detected in the oil.	Potassium	ppm	ASTM D5185m		6		
	Fuel	%	ASTM D3524		▲ 3.0		
	Water		WC Method WC Method	>0.2	NEG		
	Glycol	0/	*ASTM D7844	. 0	NEG 0.2		
	Soot %	%					
	Nitration Sulfation	Abs/cm Abs/.1mm	*ASTM D7624 *ASTM D7415	>20	8.2 21.2		
	Silt		*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	-	scalar scalar	*Visual	NORML	NORML		
	Appearance Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water			>0.2	NEG		
<u></u>			Visuai	70.2			
FLUID CONDITION	Sodium	ppm	ASTM D5185m	>216	3		
	Boron	ppm	ASTM D5185m		13		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m	10	0		
	Molybdenum	ppm	ASTM D5185m	100	21		
	Manganese	ppm	ASTM D5185m		<1		
	Magnesium	ppm	ASTM D5185m	450	103		
	Calcium	ppm	ASTM D5185m	3000	2095		
	Phosphorus	ppm	ASTM D5185m	1150	895		
	Zinc	ppm	ASTM D5185m	1350	997		
	Sulfur	ppm	ASTM D5185m		3826		
	Oxidation	Abs/.1mm	*ASTM D7414		20.3		
	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.2		
	Visc @ 100°C	cSt	ASTM D445	14.4	10.5		





Certificate L2367

Laboratory

Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : ARI0007670 Lab Number : 06214111

Unique Number : 11086975

Tested Diagnosed

Received : 18 Jun 2024 : 21 Jun 2024

: 21 Jun 2024 - Wes Davis Test Package: CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

INSITUFORM TECHNOLOGIES, INC 1088 VICTORY DRIVE

HOWELL, MI US 48843 Contact: JOSEPH KELSO

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

JKELSO@INSITUFORM.COM T: (630)270-7072

* - 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) F: (517)546-4282