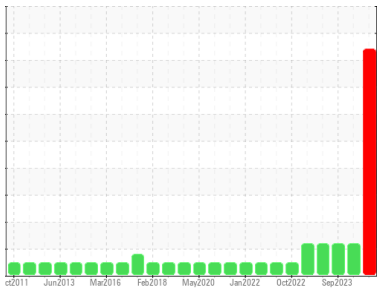
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
1995 KME FIRE 2337
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (40 QTS)

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**RW0004749**	RW0004800	RW0004784
Sample Date		Client Info		**25 Apr 2024**	26 Dec 2023	27 Sep 2023
Machine Age	hrs	Client Info		**6988**	6601	6394
Oil Age	hrs	Client Info		**397**	207	282
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	ATTENTION	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**16**	7	14
Chromium	ppm	ASTM D5185m	>10	**<1**	<1	1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>30	**4**	2	3
Lead	ppm	ASTM D5185m	>30	**<1**	<1	0
Copper	ppm	ASTM D5185m	>30	**<1**	0	<1
Tin	ppm	ASTM D5185m	>4	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**6**	29	5
Barium	ppm	ASTM D5185m	10	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	100	**107**	61	94
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	450	**876**	781	920
Calcium	ppm	ASTM D5185m	3000	**1053**	1127	1043
Phosphorus	ppm	ASTM D5185m	1150	**923**	743	999
Zinc	ppm	ASTM D5185m	1350	**1162**	885	1220
Sulfur	ppm	ASTM D5185m	4250	**3567**	2336	2996

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	**9**	15	5
Sodium	ppm	ASTM D5185m	>158	**407**	102	382
Potassium	ppm	ASTM D5185m	>20	**138**	6	4
Glycol	%	*ASTM D2982		**0.10**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.7**	0.4	0.6
Nitration	Abs/cm	*ASTM D7624	>20	**11.9**	10.8	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**23.2**	20.8	22.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**20.1**	19.8	18.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**8.55**	8.95	9.46

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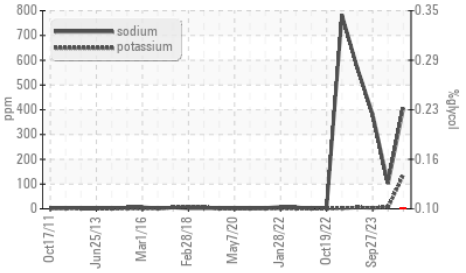
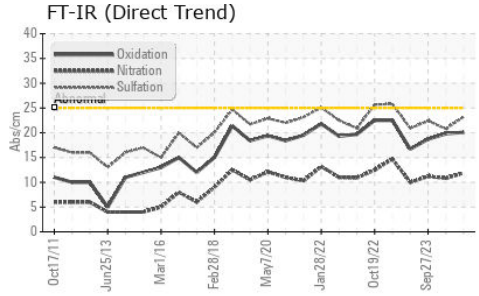
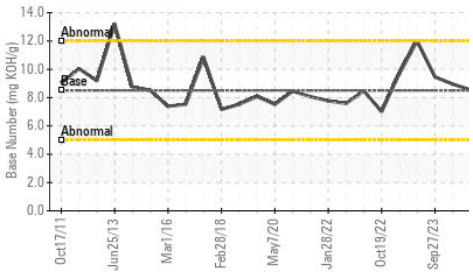
Glycol Contamination



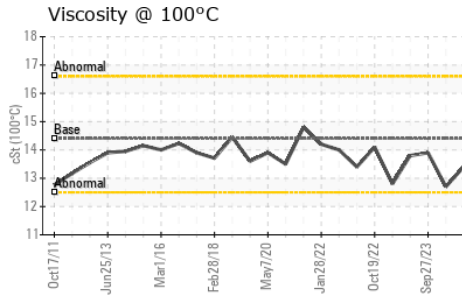
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

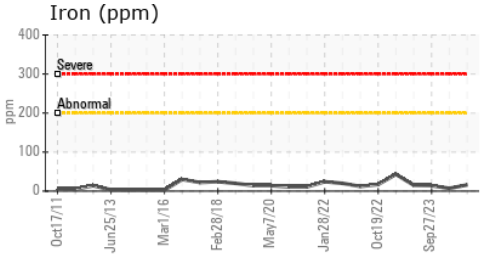


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

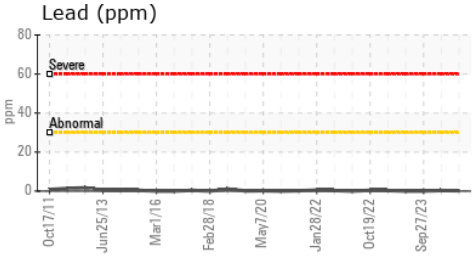
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	**13.4**	12.7	13.9

GRAPHS

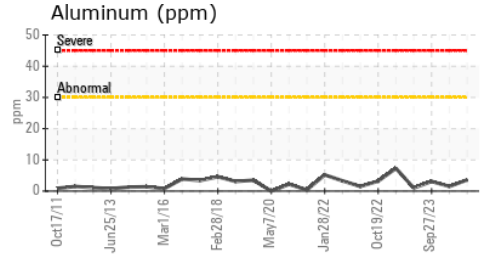
Iron (ppm)



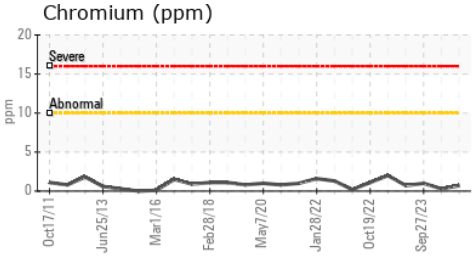
Lead (ppm)



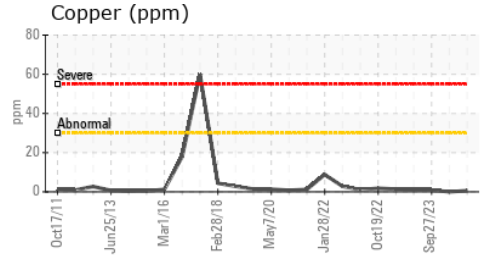
Aluminum (ppm)



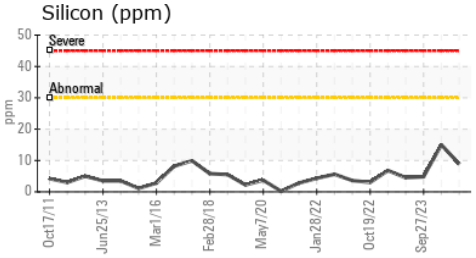
Chromium (ppm)



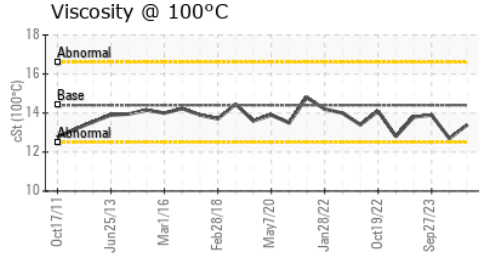
Copper (ppm)



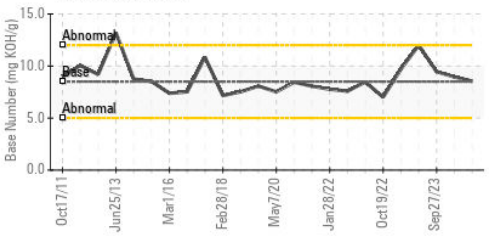
Silicon (ppm)



Viscosity @ 100°C



Base Number



ANAB ACCREDITED TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0004749
Lab Number : 06179501
Unique Number : 11030827
Test Package : MOB 2 (Additional Tests: Glycol)

Received : 14 May 2024
Tested : 16 May 2024
Diagnosed : 16 May 2024 - Wes Davis

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)

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Report Id: CITFARMI [WUSCAR] 06179501 (Generated: 05/16/2024 12:39:30) Rev: 1

Contact/Location: JERRY BROCK - CITFARMI