



WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
9217393

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. 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.

WEAR

All component wear rates are normal.

CONTAMINATION

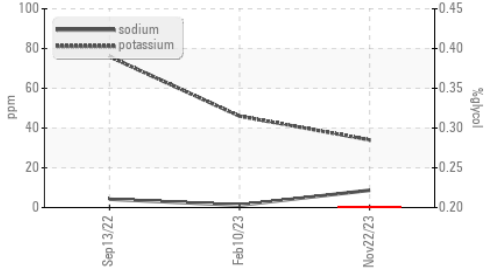
Test for glycol is positive. Light fuel dilution occurring. There is a high concentration of glycol present in the oil. There is a high concentration of water present in the oil. No other contaminants were detected in the oil.

FLUID CONDITION

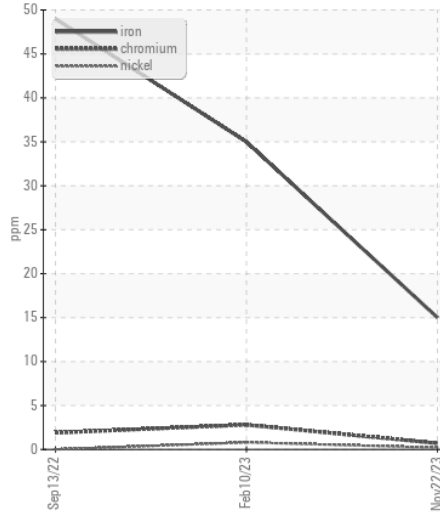
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL06047506	IL05828653	IL05687767
Sample Date		Client Info		22 Nov 2023	10 Feb 2023	13 Sep 2022
Machine Age	mls	Client Info		184838	0	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	15	35	49
Chromium	ppm	ASTM D5185m	>20	<1	3	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	6	17	26
Lead	ppm	ASTM D5185m	>40	5	7	6
Copper	ppm	ASTM D5185m	>330	2	6	19
Tin	ppm	ASTM D5185m	>15	3	3	4
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	9	15	▲ 44
Potassium	ppm	ASTM D5185m	>20	▲ 34	46	76
Fuel	%	ASTM D3524	>5	2.6	<1.0	0.9
Water	%	ASTM D6304	>0.2	● 1.58	---	---
ppm Water	ppm	ASTM D6304	>2000	● 15800	---	---
Glycol	%	*ASTM D2982		● 0.20	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	13.8	10.7	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.0	23.1	25.2
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	▲ SOLID	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	● 0.2%	NEG	NEG
Sodium	ppm	ASTM D5185m		9	1	4
Boron	ppm	ASTM D5185m	250	33	16	18
Barium	ppm	ASTM D5185m	10	<1	0	0
Molybdenum	ppm	ASTM D5185m	100	45	57	60
Manganese	ppm	ASTM D5185m		<1	2	5
Magnesium	ppm	ASTM D5185m	450	489	635	415
Calcium	ppm	ASTM D5185m	3000	1578	1496	1762
Phosphorus	ppm	ASTM D5185m	1150	731	835	909
Zinc	ppm	ASTM D5185m	1350	899	1059	1185
Sulfur	ppm	ASTM D5185m	4250	2392	2372	2620
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.9	22.1	22
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	12.9	6.9	6.8
Visc @ 100°C	cSt	ASTM D445	10.9	8.9	11.4	11.6

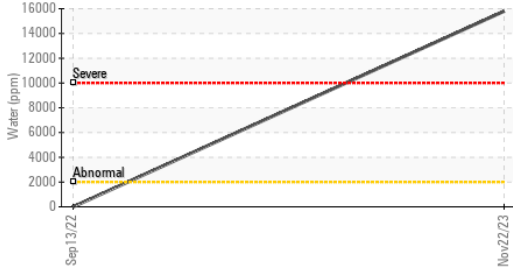
Glycol Contamination



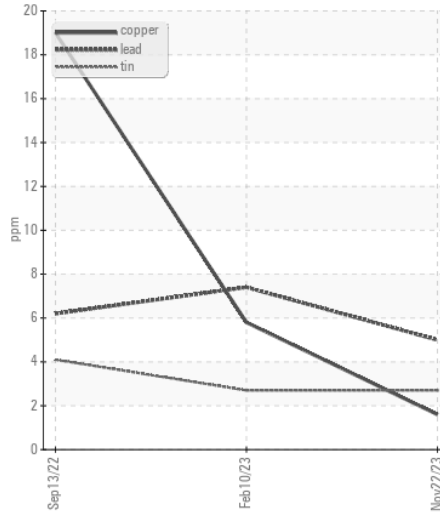
Ferrous Alloys



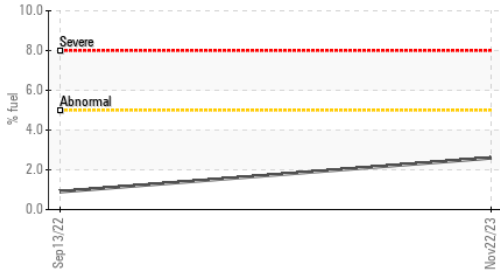
Water (KF)



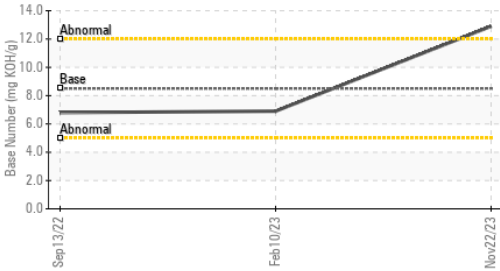
Non-ferrous Metals



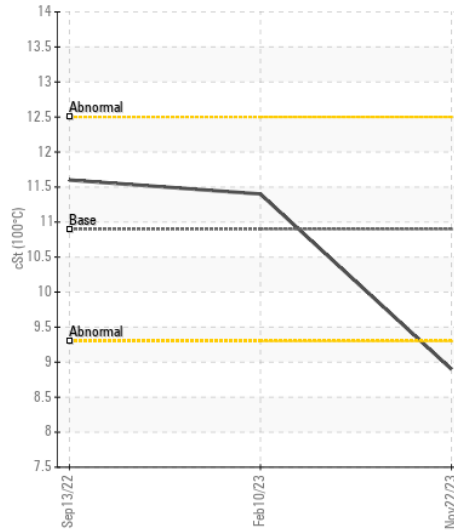
Fuel Dilution



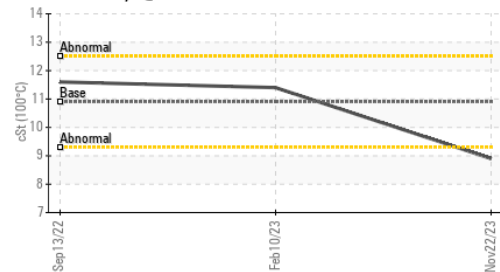
Base Number



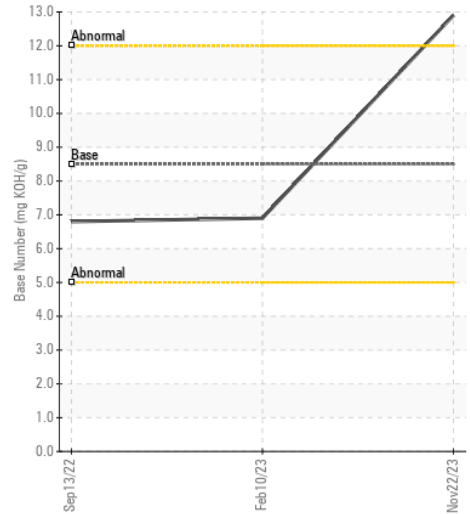
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL06047506 **Received** : 29 Dec 2023
Lab Number : 06047506 **Diagnosed** : 09 Jan 2024
Unique Number : 10808114 **Diagnostician** : Doug Bogart
Test Package : FLEET (Additional Tests: FuelDilution, Glycol, KF, PercentFuel)

IDEALASE-NORCROSS
 4571 NORTH BUFORD HWY
 NORCROSS, GA
 US 30071-2808
 Contact: RICK MARKS

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)

T:
 F: (770)300-0614