



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1409
 Component
Gasoline Engine
 Fluid
GASOLINE ENGINE OIL SAE 5W30 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0962147	WC0602990	WC0572273
Sample Date		Client Info		06 Jul 2024	14 Aug 2021	10 Apr 2021
Machine Age	mls	Client Info		161942	86317	70745
Oil Age	mls	Client Info		7346	10062	11023
Filter Age	mls	Client Info		7346	10062	11023
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	26	64	92
Chromium	ppm	ASTM D5185m	>20	<1	2	3
Nickel	ppm	ASTM D5185m	>5	<1	1	2
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	6	6	8
Lead	ppm	ASTM D5185m	>50	0	0	<1
Copper	ppm	ASTM D5185m	>155	13	27	36
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

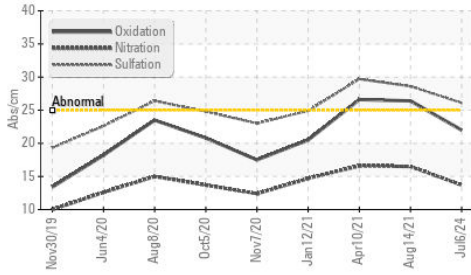
Silicon	ppm	ASTM D5185m	>30	13	12	11
Potassium	ppm	ASTM D5185m	>20	3	6	2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	13.7	16.5	16.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.1	28.6	29.7
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

FLUID CONDITION

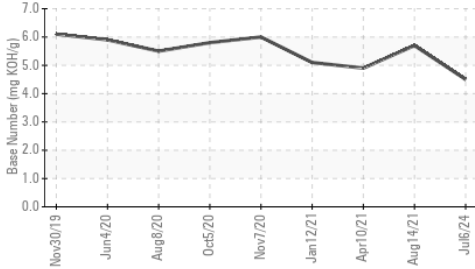
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>400	6	5	3
Boron	ppm	ASTM D5185m	75	15	21	25
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	100	179	66	70
Manganese	ppm	ASTM D5185m		6	1	1
Magnesium	ppm	ASTM D5185m	12	614	491	498
Calcium	ppm	ASTM D5185m	2100	1089	1217	1086
Phosphorus	ppm	ASTM D5185m	650	516	645	589
Zinc	ppm	ASTM D5185m	850	674	672	718
Sulfur	ppm	ASTM D5185m	2500	2209	2306	2078
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.0	26.4	26.6
Base Number (BN)	mg KOH/g	ASTM D2896		4.5	5.7	4.9
Visc @ 100°C	cSt	ASTM D445	10.9	9.8	10.1	9.5

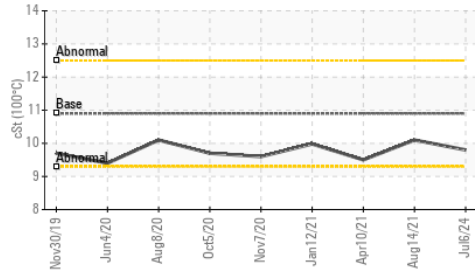
FT-IR (Direct Trend)



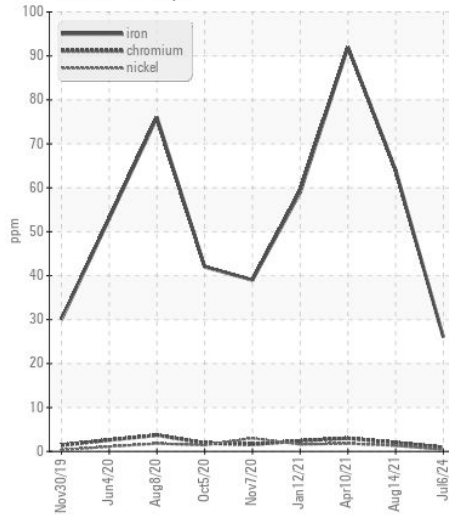
Base Number



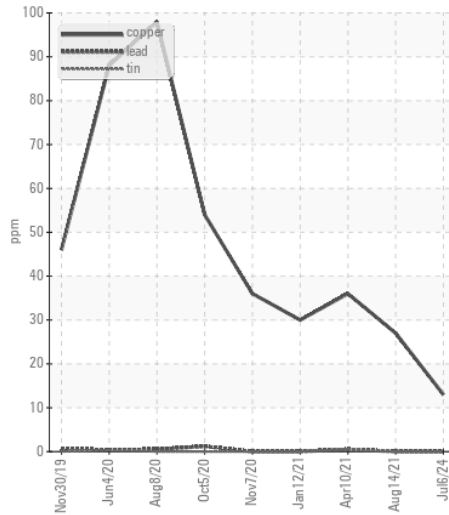
Viscosity @ 100°C



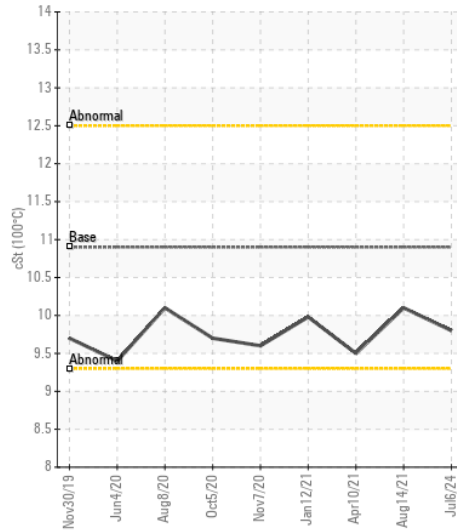
Ferrous Alloys



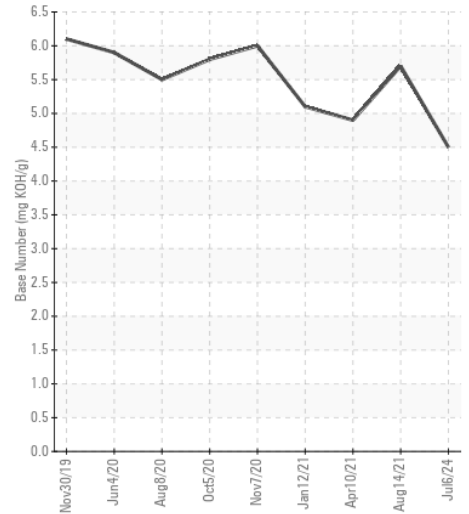
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0962147
Lab Number : 06241117
Unique Number : 11129951
Test Package : FLEET
Received : 18 Jul 2024
Tested : 19 Jul 2024
Diagnosed : 19 Jul 2024 - Wes Davis

CARCO TRANSPORTATION
 3403 EAST ROOSEVELT ROAD
 LITTLE ROCK, AR
 US 72206
 Contact: DENNIS CATES
 denniscales@carcotrans.com
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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)