TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
DODGE RC116
Component
Gasoline Engine
Fluid
TRC PRO-SPEC SYNTHETIC 5W20 (6 LTR)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

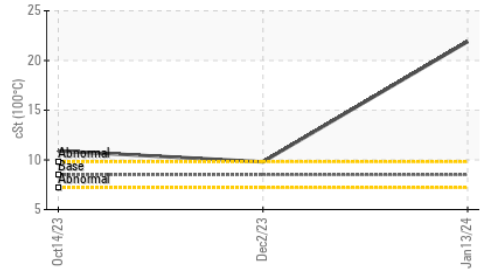
There is no indication of any contamination in the oil.

FLUID CONDITION

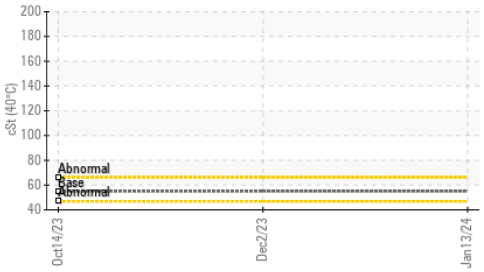
The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 50 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02627287	TR02602241	TR02597083
Sample Date		Client Info		13 Jan 2024	02 Dec 2023	14 Oct 2023
Machine Age	hrs	Client Info		147857	124279	99764
Oil Age	hrs	Client Info		23578	24515	25529
Filter Age	hrs	Client Info		23578	24515	25529
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>150	16	17	17
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>40	5	3	4
Lead	ppm	ASTM D5185(m)	>50	0	1	2
Copper	ppm	ASTM D5185(m)	>155	9	15	17
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>30	11	22	22
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
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	0	0
Nitration	Abs/cm	ASTM D7624*	>20	12.9	13.7	13.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	70.8	37.2	40.2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)	>400	2	2	2
Boron	ppm	ASTM D5185(m)		27	27	18
Barium	ppm	ASTM D5185(m)		0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	400	● 54	91	126
Manganese	ppm	ASTM D5185(m)		0	2	2
Magnesium	ppm	ASTM D5185(m)	600	354	458	438
Calcium	ppm	ASTM D5185(m)	1500	● 820	1147	1018
Phosphorus	ppm	ASTM D5185(m)	800	● 435	601	535
Zinc	ppm	ASTM D5185(m)	900	● 546	722	677
Sulfur	ppm	ASTM D5185(m)		● 1584	1995	1390
Oxidation	Abs/.1mm	ASTM D7414*	>25	26.8	29.1	28.6
Acid Number (AN)	mg KOH/g	ASTM D974*		2.86	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	4.31	3.51	3.23
Visc @ 40°C	cSt	ASTM D7279(m)	55	▲ 193	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	8.5	▲ 21.9	9.8	10.9
Viscosity Index (VI)	Scale	ASTM D2270*	150	136	---	---

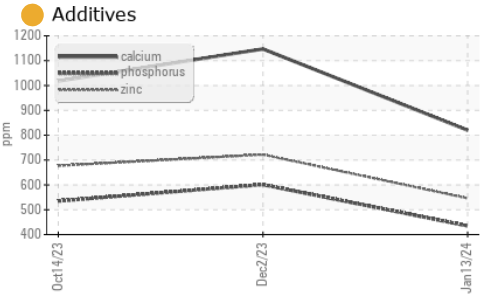
Viscosity @ 100°C



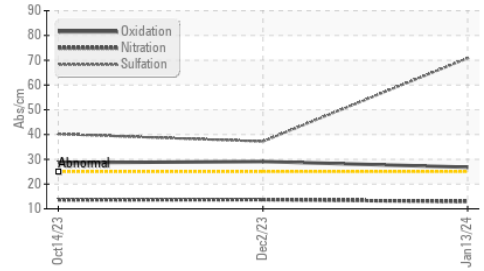
Viscosity @ 40°C



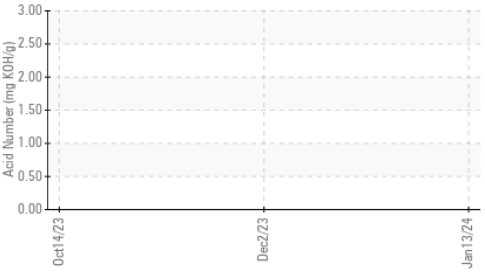
Additives



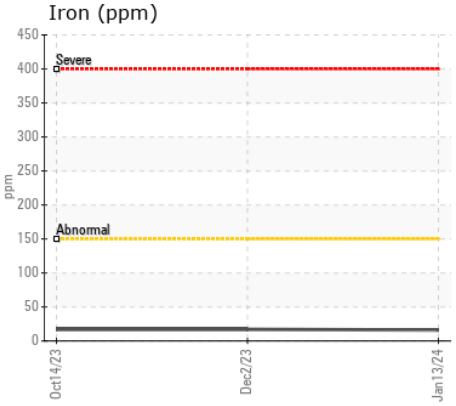
FT-IR (Direct Trend)



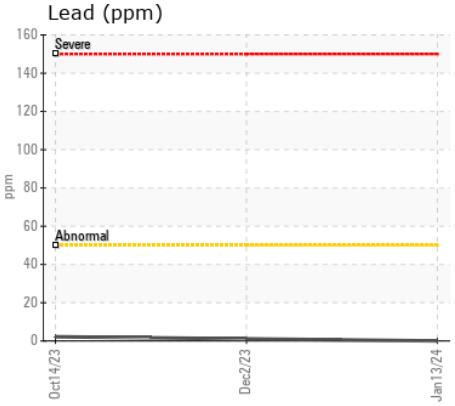
Acid Number



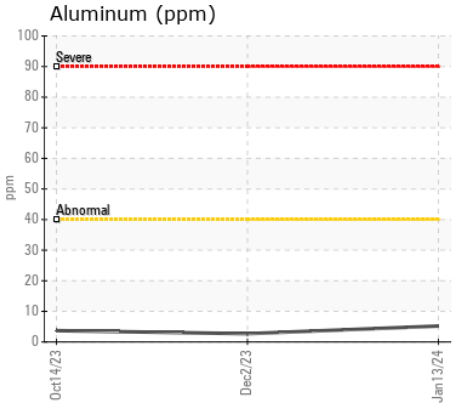
Iron (ppm)



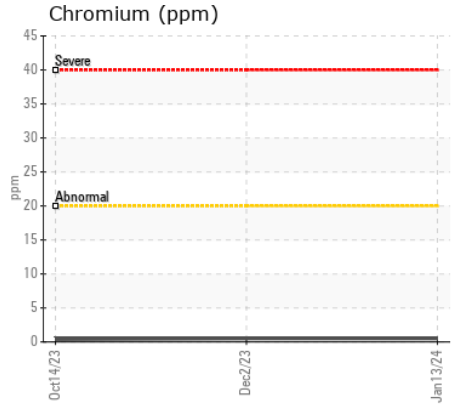
Lead (ppm)



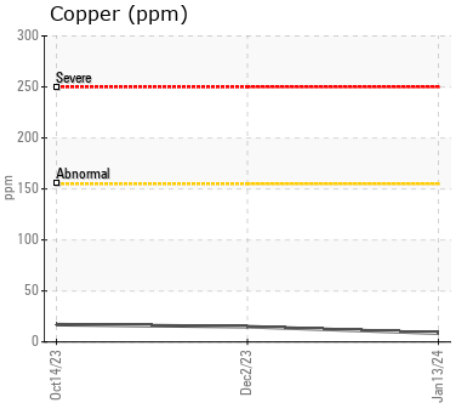
Aluminum (ppm)



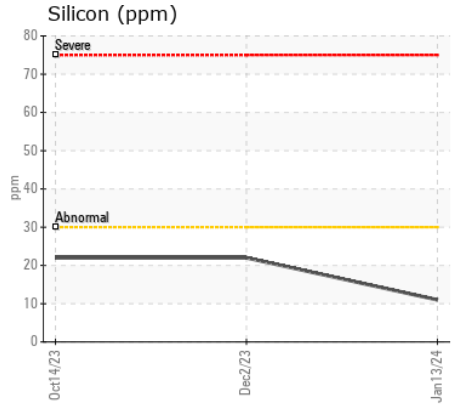
Chromium (ppm)



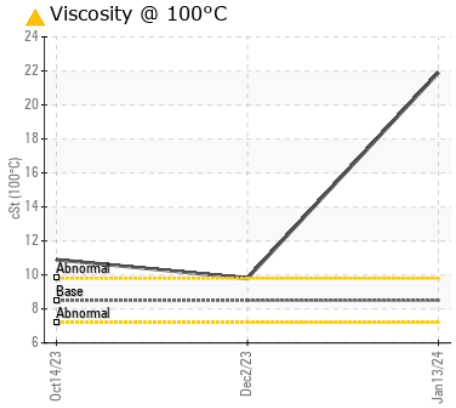
Copper (ppm)



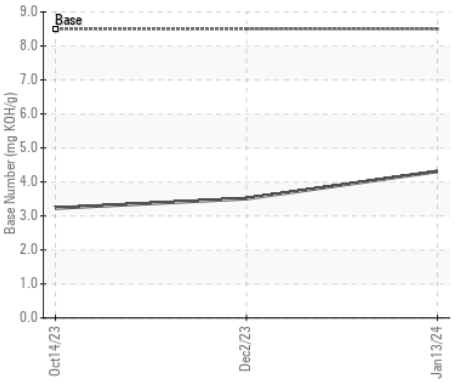
Silicon (ppm)



Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02627287 **Received** : 08 Apr 2024
Lab Number : 02627287 **Tested** : 10 Apr 2024
Unique Number : 5760419 **Diagnosed** : 11 Apr 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: KV40, TAN AUTO, TAN Man, TBN, VI)

To discuss this sample report, contact Customer Service at 1-800-827-0711.
** - 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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