TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Machine Id
DODGE PT-2
Component
Diesel Engine
Fluid
TRC MOLY XL PROSPEC III 15W40 (11 LTR)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

CONTAMINATION

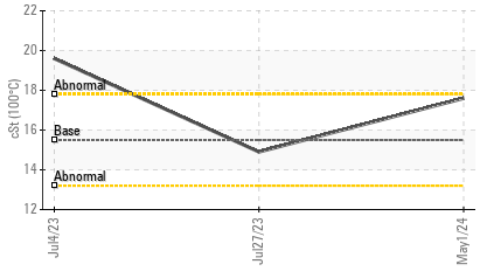
Light concentration of carbon/soot present in the oil.

FLUID CONDITION

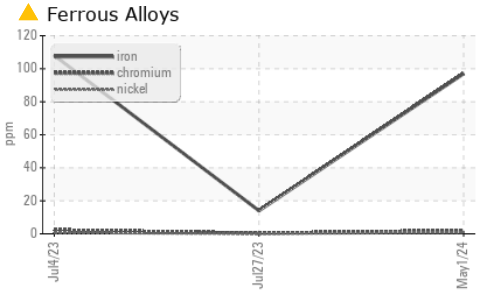
The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 50 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02634517	TR02575829	TR02571366
Sample Date		Client Info		01 May 2024	27 Jul 2023	04 Jul 2023
Machine Age	kms	Client Info		433320	414485	414474
Oil Age	kms	Client Info		19100	15	30000
Filter Age	kms	Client Info		19100	15	15000
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	NORMAL	ABNORMAL
PQ		ASTM D8184*		0	---	0
Iron	ppm	ASTM D5185(m)	>90	▲ 97	14	▲ 108
Chromium	ppm	ASTM D5185(m)	>20	2	<1	2
Nickel	ppm	ASTM D5185(m)	>2	<1	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	6	2	4
Lead	ppm	ASTM D5185(m)	>40	0	0	0
Copper	ppm	ASTM D5185(m)	>330	2	<1	2
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	<1
Silicon	ppm	ASTM D5185(m)	>25	5	7	7
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>6	▲ 5.2	0.7	▲ 6.5
Nitration	Abs/cm	ASTM D7624*	>20	15.2	8.1	29.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	31.6	19.1	54.0
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		3	3	3
Boron	ppm	ASTM D5185(m)		49	67	45
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		218	206	201
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		30	21	22
Calcium	ppm	ASTM D5185(m)	4500	4560	4371	4303
Phosphorus	ppm	ASTM D5185(m)		968	1045	1021
Zinc	ppm	ASTM D5185(m)	1400	1136	1110	1127
Sulfur	ppm	ASTM D5185(m)		3559	3765	3448
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.5	11.3	48.9
Base Number (BN)	mg KOH/g	ASTM D2896*	15	15.60	14.90	13.06
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	▲ 17.6	14.9	▲ 19.6

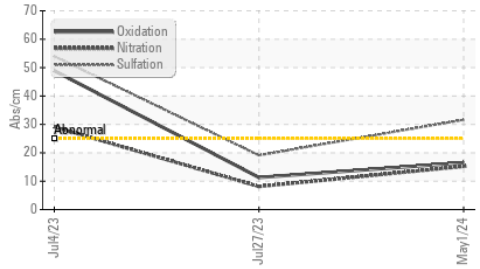
Viscosity @ 100°C



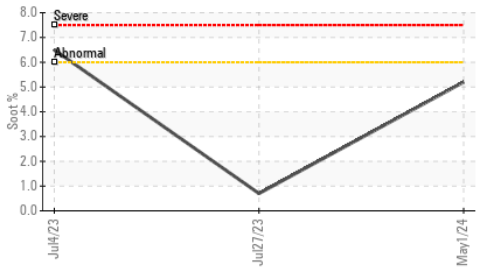
Ferrous Alloys



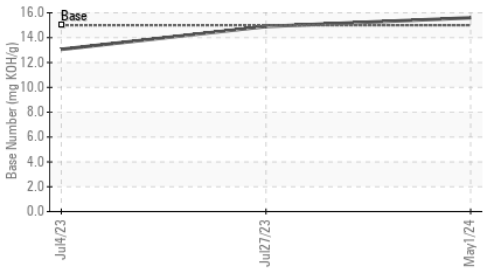
FT-IR (Direct Trend)



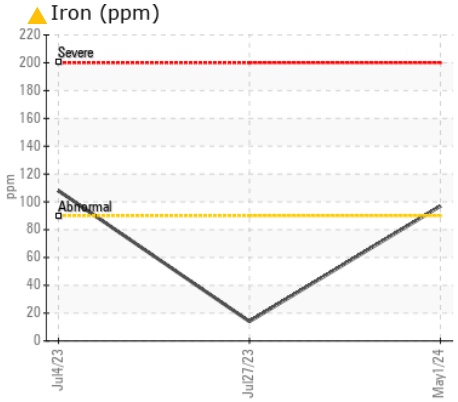
Soot %



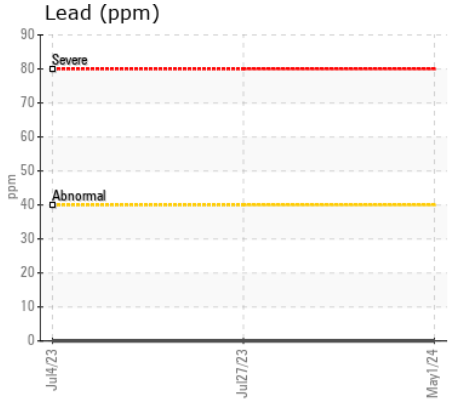
Base Number



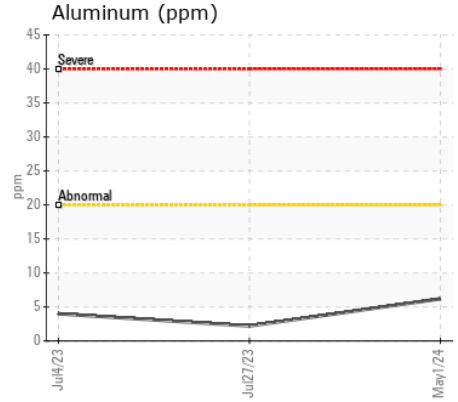
Iron (ppm)



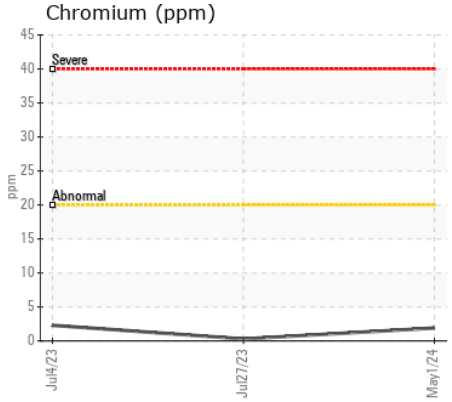
Lead (ppm)



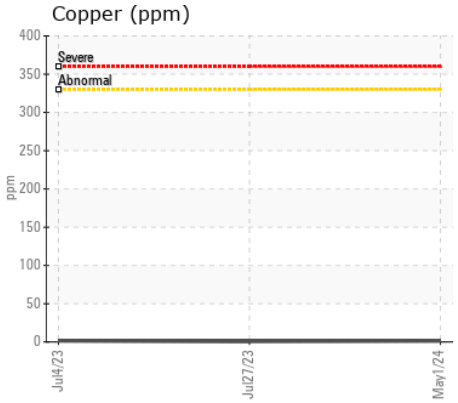
Aluminum (ppm)



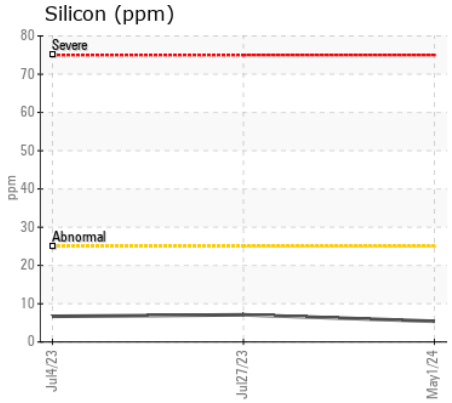
Chromium (ppm)



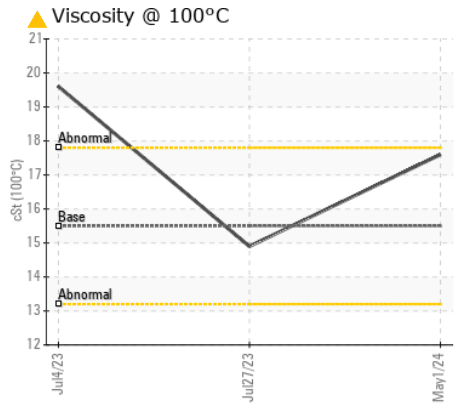
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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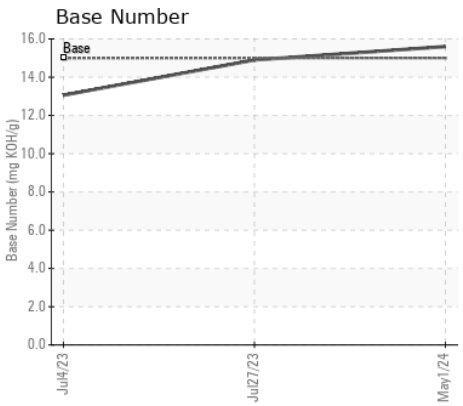

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02634517 **Received** : 10 May 2024
Lab Number : 02634517 **Tested** : 10 May 2024
Unique Number : 5775670 **Diagnosed** : 13 May 2024 - Kevin Marson
Test Package : MOB 2 (Additional Tests: PQ)

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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