

OIL ANALYSIS REPORT

Sample Rating Trend FUEL

DODGE M-1 Component

Diesel Engine Elui CHEVRON DELO 400 LE 15W40 (3 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

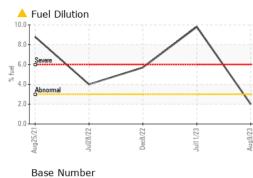
Fluid Condition

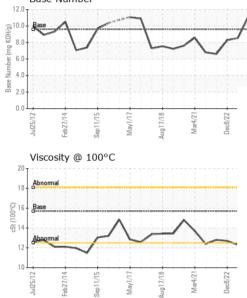
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0819760	WC0819753	WC0756069
Sample Date		Client Info		09 Aug 2023	11 Jul 2023	08 Dec 2022
Machine Age	mls	Client Info		255671	254181	246583
Oil Age	mls	Client Info		1300	7500	7500
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				MARGINAL	SEVERE	ABNORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	12	63	46
Chromium	ppm	ASTM D5185m	>20	<1	2	1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	8	2
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	<1	1	1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		349	201	209
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		115	109	100
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		627	573	549
Calcium	ppm	ASTM D5185m		1503	1371	1416
Phosphorus	ppm	ASTM D5185m	1200	670	595	572
Zinc	ppm	ASTM D5185m	1300	808	725	719
Sulfur	ppm	ASTM D5185m	3200	2780	2497	2058
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	10	9
Sodium	ppm	ASTM D5185m		2	5	2
Potassium	ppm	ASTM D5185m	>20	3	2	0
Fuel	%	ASTM D3524	>3.0	<u> </u>	9.8	▲ 5.7
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	0.4	2.3	2.2
Nitration	Abs/cm	*ASTM D7624	>20	6.5	15.8	15.5
Sulfation	Abs/.1mm	*ASTM D7415		22.9	29.2	30.7
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Al / d	*ASTM D7414	05		0.5.0	05.0
Oxidation	Abs/.1mm	ASTN D7414	>25	16.4	25.3	25.6
Oxidation Base Number (BN)	Abs/.1mm mg KOH/g	ASTM D7414 ASTM D2896		16.4 11.21	25.3 8.54	25.6 8.28



OIL ANALYSIS REPORT





		VISUAL		method	limit/base	current	history1	history2
	\land	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
1	/	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
22	23 -		scalar	*Visual	NORML	NORML	NORML	NORML
Dec8/22	Jul11/23	Appearance Odor	scalar	*Visual	NORML	NORML	NORML	NORML
		Emulsified Water		*Visual	>0.2	NEG	NEG	NEG
			scalar		>0.2			
\neg		Free Water	scalar	*Visual		NEG	NEG	NEG
L	\sim	FLUID PROPER Visc @ 100°C	cSt	method ASTM D445	limit/base	current	history1	history2 12.7
			031	ASTIVI D443	13.7	13.1	12.3	12.7
		GRAPHS						
		Iron (ppm)				Lead (ppm)		
		300				Severe		
May1/17	Mar4/21 Dec8/22	250 - 200 - Severe				50 - C		
Ma	M D	ā 150-	1		<u>6</u>	Abaamal		
		100 Abnormal	1			H0 - Abnormal		
		50-	\smile	\sim	2	20		
			17	21+	77		17	21
		Jul25/12 Feb27/14	May1/17	Mar4/21	neco/77	Jul25/12 Feb27/14 Sep11/15	May1/17 Aug17/18	Mar4/21 Dec8/22
		_ 07	AL	_	-	_ 00		
		Aluminum (ppm)				Chromium (pp	om)	
		40 - Severe				Severe		
		20						
ug17/18 -	121	20 Abnormal			und 2	Abnormal		
Aug17/18	Mar4/21 Dec8/22	10				10		
4			\sim	$\neg \land$	\sim			
			7/17	4/21	77/0	5/12 7/14	1/17	4/21-
		Jul25/12 Feb27/14	May1/17	Mar4/21	Deco/22	Jul25/12 Feb27/14	May1/17 Aug17/18	Mar4/21 Dec8/22
		Copper (ppm)	4			Silicon (ppm)	4	
		400 Severe			8	³⁰ Severe		
		300				50 -		
		틆 200 -			4 d	Abnormal		
		100 -			2	20	\wedge	
		0	_			0	~	\sim
		Jul25/12 Feb27/14 Sep11/15	May1/17	Mar4/21	neco/77	Jul25/12 - Feb27/14 - Sep11/15 -	May1/17	Mar4/21
		Jul2 Feb2 Sep1	May Aug1	N N	Dec	Jul25/12 Feb27/14 Sep11/15	May Aug1	Ma
		Viscosity @ 100°	C			Base Number		
		20			12 \$\overline{2}10 \$\overline{2}10 \$\overline			1
		Abnormal			품10			
		18 - Abnormal			×			
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		C-010 C-010 U 314 Abagmal		<u> </u>	Base Number		~	
		C-010 C-010 U 314 Abagmal	-11/1W	ar4/21	+ 0		The second seco	ar4/21
		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	May1/17 +	Mar4/21	Base Number (mg K	.0 .0 .0	T/LIVEM	Mar4/21
		Sopolitical Sector 11/12 Sector 12/12 Sector			0 000	Jud25/12 Feb27/14	P	
4	Laboratory	Base 10 16 16 10 16 10 10 10 10 10 10 10 10 10 10	501 Madi	son Ave., Ca	ary, NC 2751	Jud25/12 Feb27/14	P	ISPOSAL LLC
AB	Sample No.	: WearCheck USA - : WC0819760	501 Madia Received	son Ave., Ca d : 16	ary, NC 2751 Aug 2023	Jud25/12 Feb27/14	ALLEGHENY D	IISPOSAL LLC PO BOX 4
	Sample No. Lab Number	: WearCheck USA - : WC0819760 : 05926840	501 Madia Received Diagnos	son Ave., Ca d : 16 ed : 18	ary, NC 2751 Aug 2023 Aug 2023	Jud25/12 Feb27/14	ALLEGHENY D	PO BOX 4 PO BOX 4 EN BANK, WV
	Sample No. Lab Number Unique Number	: WearCheck USA - : WC0819760 : 05926840 er : 10606787	501 Madia Received Diagnos Diagnos	son Ave., Ca 1 : 16 ed : 18 tician : Do	ary, NC 2751 Aug 2023	Leng 27/14	ALLEGHENY D	ISPOSAL LLC PO BOX 4 EN BANK, WV US 24944
	Sample No. Lab Number Unique Number Test Packag	: WearCheck USA - : WC0819760 : 05926840 : 10606787	501 Madia Received Diagnos Diagnost Tests: Pe	son Ave., Ca d : 16 ed : 18 tician : Do ercentFuel)	ary, NC 2751 Aug 2023 Aug 2023 n Baldridge	Leng 27/14	ALLEGHENY D GRE Contact: SERVI	ISPOSAL LLC PO BOX 4 EN BANK, WV US 24944
	Sample No. Lab Number Unique Number Test Packag sample report	: WearCheck USA - : WC0819760 : 05926840 er : 10606787 e : MOB 2 (Additional	501 Madia Received Diagnos Diagnos Tests: Pe vice at 1-8	son Ave., Ca d : 16 ed : 18 tician : Do ercentFuel) 200-237-136	ary, NC 2751 Aug 2023 Aug 2023 n Baldridge 9.	Leng 27/14	ALLEGHENY D GRE Contact: SERVI meckmechani	PO BOX 4 PO BOX 4 EN BANK, WV US 24944 CE MANAGEF