

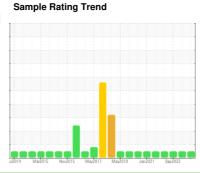
# **OIL ANALYSIS REPORT**

# 52000 series Navistar 52577

Component

**Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (40 LTR)





### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the

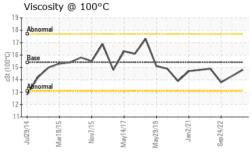
### **Fluid Condition**

The condition of the oil is acceptable for the time in

L 1 1 1 1 1		ul2014 Ma	r2015 Nov2015 May2	017 May2019 Jan2021 S	ep 2022		
SAMPLE INFORMATION		method	limit/base	current	history1	history2	
Sample Number		Client Info		WC0837220	WC0797597	WC0738263	
Sample Date		Client Info		18 Aug 2023	01 Apr 2023	24 Sep 2022	
Machine Age	mls	Client Info		440831	414303	407582	
Oil Age	mls	Client Info		26528	6721	20001	
Oil Changed		Client Info		Changed	Changed	Changed	
Sample Status				NORMAL	NORMAL	NORMAL	
CONTAMINATIO	N	method	limit/base	current	history1	history2	
Fuel		WC Method	>5	<1.0	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	49	36	30	
Chromium	ppm	ASTM D5185(m)	>20	2	2	1 <1	
Nickel	ppm	ASTM D5185(m)	>4	5	<b>5</b> 3		
Titanium	ppm	ASTM D5185(m)		0	<1	<1	
Silver	ppm	ASTM D5185(m)	>3	0	0	0	
Aluminum	ppm	ASTM D5185(m)	>20	4	3	3	
Lead	ppm	ASTM D5185(m)	>40	10	2	5	
Copper	ppm	ASTM D5185(m)	>330	3	3	6	
Tin	ppm	ASTM D5185(m)	>15	1	<1	1	
Antimony	ppm	ASTM D5185(m)		0	0	<1	
Vanadium	ppm	ASTM D5185(m)		0	0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	0	
Cadmium	ppm	ASTM D5185(m)	0		0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	3	4	3	
Barium	ppm	ASTM D5185(m)	0	0	0	0	
Molybdenum	ppm	ASTM D5185(m)	60	74	64	66	
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1	
Magnesium	ppm	ASTM D5185(m)	1010	1191	1015	1056	
Calcium	ppm	ASTM D5185(m)	1070	1293	1188	1233	
Phosphorus	ppm	ASTM D5185(m)	1150	1228	1156	1132	
Zinc	ppm	ASTM D5185(m)	1270	1425	1249	1313	
Sulfur	ppm	ASTM D5185(m)	2060	2725	2752	2613	
Lithium	ppm	ASTM D5185(m)		<1	<1	<1	
CONTAMINANTS	;	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	6	7	6	
Sodium	ppm	ASTM D5185(m)		7	6	4	
Potassium	ppm	ASTM D5185(m)	>20	13	6	6	
INFRA-RED		method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	1	0.2	0.7	
Nitration	Abs/cm	ASTM D7624*	>20	15.0	10.4	14.1	
Sulfation	Abs/.1mm	ASTM D7415*	>30	30.9	24.9	27.3	
FLUID DEGRADA	NOITA	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	27.4	17.4	25.8	



## **OIL ANALYSIS REPORT**



VISUAL		method	limit/base	current	history1	history2	
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG	
Free Water	scalar	Visual*		NEG	NEG	NEG	
FLUID PROPERTIES		method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.8	14.3	13.8	
Visc @ 100°C GRAPHS	cSt	ASTM D7279(m)			,	•	

Visc @ 100°C	cSt	ASTM D/2/9	(m) 15.4	14.8	14.3		13.	8
GRAPHS								
Iron (ppm)				Lead (ppm)	)			
200 Severe				80 - Severe				
				70				
150-				Abnormal		1	++++	
100 - Abnormal				30 -	$\Lambda$	1		
50	_		<b>_</b>	10	ノV	1	$\overline{}$	
0 4 5 5	- 1	721	- 22	0 4 5 5	/15	- 61/	12/	722
Jul29/14 Mar18/15	May14/17	May29/19	Sep24/22	Jul29/14 Mar18/15	Nov7/15 May14/17	May29/19	Jan2/21	Sep24/22
Aluminum (ppm)				Chromium	(ppm)			
40 - Severe				40 - Severe				
35	-1			35				
E 25 20 Almormal				Abnormal			++++	
15				15			-}	
5				5				
0 4 5 5	114	173	722	0 4 5 5	715	19	1/2/	722
Jul29/14 Mar18/15	May14/17	May29/19 Jan2/21	Sep24/22	Jul29/14	Nov7/15	May29/19	Jan2/21	Sep24/22
Copper (ppm)				Silicon (ppn	n)			
Severe 350 - Abnormal				No Severe				
300				50+				
E 200				E 40				
150				Abnormal				
50				10-	~~			
0 Jul29/14 + Aar18/15 + Aar18/15 - Aar18/15	1/17	ay29/19 -	1/22	0 4 4 5 5 5	Nov7/15 lay14/17	- 61/6	Jan2/21	1/22
, 2		May29/19 Jan2/21	Sep24/22	Jul29/14	Nov7/15 May14/17	May29/19	Jan	Sep24/22
Viscosity @ 100°C	:			Soot %				
18 - Abnormal				5.0 Severe				
016	~1			4.0				
316 Base 8 14	<i>/</i>		\ /	Abnormal				
3 14 Abnormal		~		2.0			+	
12				1.0			~	~/
11 4 5 5	+117+	-12/2	1/22	0.0	//15- //17-	61/6	2/21	1722
Jul29/14 Mar18/15	May14/17	Vlay29/19	Sep24/22	Jul29/14	Nov7/15 May14/17	May29/19	Jan2/21	Sep24/22



**CALA** ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5630487 Test Package : MOB 1

: 02577427

: WC0837220

Received Diagnosed

: 22 Aug 2023 : 23 Aug 2023 Diagnostician : Kevin Marson

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 MANITOULIN TRANSPORT (GARAGE) 1335 SHAWSON DRIVÉ MISSISSAUGA, ON CA L4W 1C4

Contact: Travis Spence tspence@manitoulintransport.com

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

F: (905)564-6361