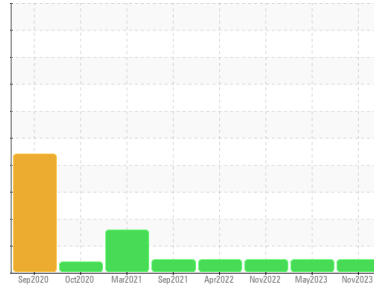


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**DT38**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 10W30 (--- QTS)**

## DIAGNOSIS

### Recommendation

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. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0090319</b>	PCA0098261	PCA0084937
Sample Date	Client Info		<b>07 Nov 2023</b>	08 May 2023	14 Nov 2022
Machine Age	mls	Client Info	<b>179319</b>	155169	131885
Oil Age	mls	Client Info	<b>25000</b>	155169	25000
Oil Changed	Client Info		<b>Changed</b>	N/A	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >110	<b>21</b>	25	33
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >25	<b>9</b>	9	16
Lead	ppm	ASTM D5185m >45	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >85	<b>1</b>	<1	2
Tin	ppm	ASTM D5185m >4	<b>0</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	<b>2</b>	4	7
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 50	<b>68</b>	72	65
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 950	<b>991</b>	1030	921
Calcium	ppm	ASTM D5185m 1050	<b>1187</b>	1142	1171
Phosphorus	ppm	ASTM D5185m 995	<b>1020</b>	1092	1023
Zinc	ppm	ASTM D5185m 1180	<b>1328</b>	1353	1270
Sulfur	ppm	ASTM D5185m 2600	<b>2912</b>	3471	3074

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>7</b>	7	6
Sodium	ppm	ASTM D5185m	<b>0</b>	4	<1
Potassium	ppm	ASTM D5185m >20	<b>16</b>	16	29

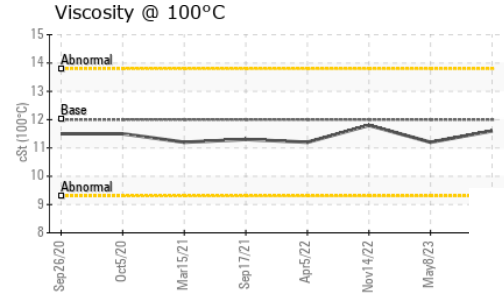
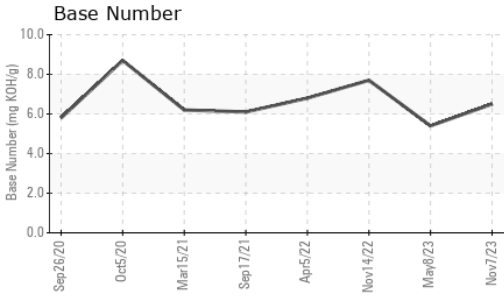
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.8</b>	0.8	0.8
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.2</b>	11.0	12.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.4</b>	23.9	24.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.3</b>	20.3	20.9
Base Number (BN)	mg KOH/g	ASTM D2896	<b>6.5</b>	5.4	7.7

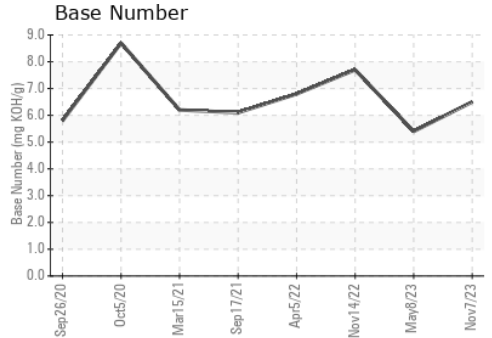
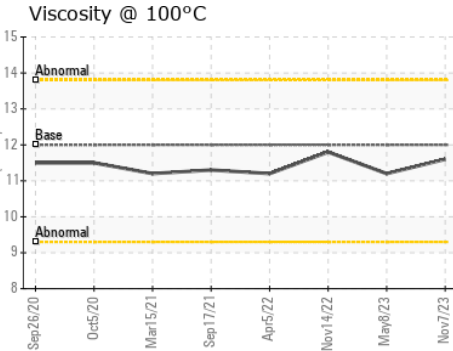
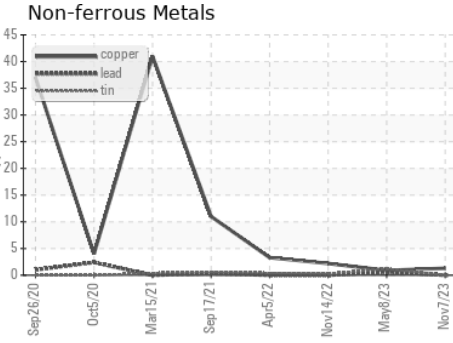
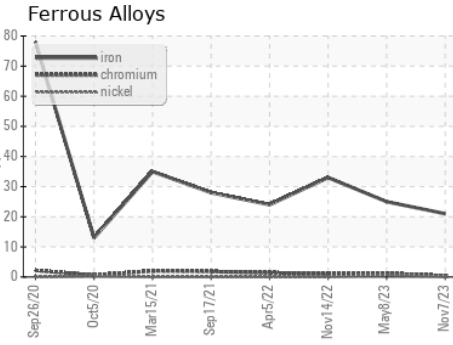
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	12.00	<b>11.6</b>	11.2	11.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0090319 **Received** : 08 Nov 2023  
**Lab Number** : **06002123** **Diagnosed** : 09 Nov 2023  
**Unique Number** : 10735885 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**HK STEEL INC**  
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 WEST COLUMBIA, SC  
 US 29169  
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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)