

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend



# Machine Id 632651

#### Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (--- GAL)

### 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

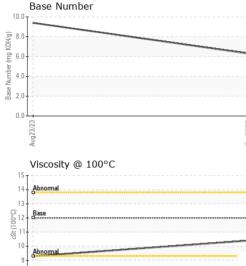
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

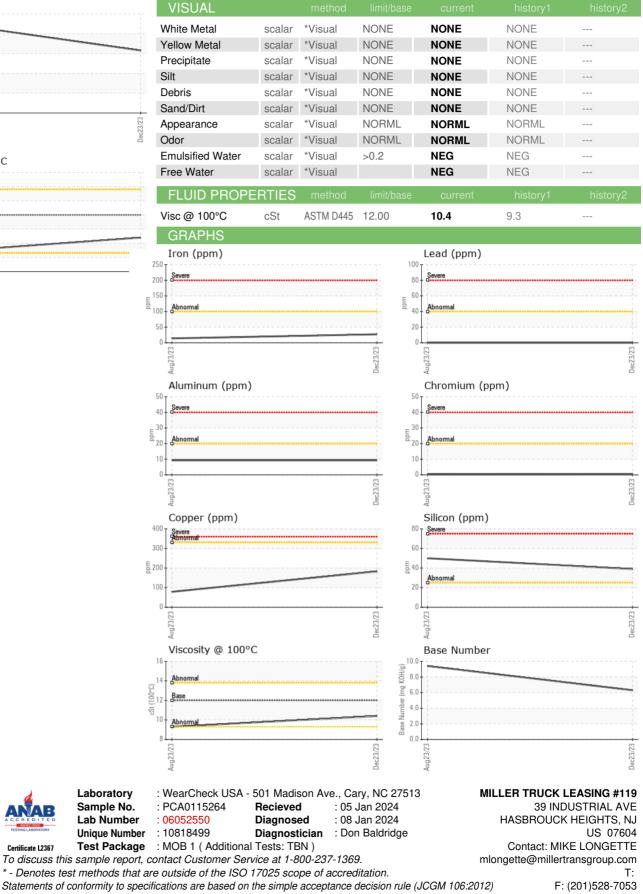
,			Aug2023	Dec2023		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0115264	PCA0104238	
Sample Date		Client Info		23 Dec 2023	23 Aug 2023	
Machine Age	mls	Client Info		8518	627	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		Not Changd	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	27	14	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	<1	<1	
Titanium	ppm	ASTM D5185m	~7	2	0	
Silver	ppm	ASTM D5185m	>3	2 <1	<1	
Aluminum	ppm	ASTM D5185m	>20	9	9	
Lead		ASTM D5185m	>20	9	0	
	ppm	ASTM D5185m		183	79	
Copper Tin	ppm		>330 >15		2	
Vanadium	ppm	ASTM D5185m ASTM D5185m	>10	3 0	0	
	ppm	ASTIVI DOTODITI			0	
Codmium	nnm	ACTM DE185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	history2
	ppm ppm		limit/base		-	
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 159	history1 480	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 159 0	history1 480 0	history2 
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 159 0 109	history1 480 0 118	history2  
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 159 0 109 3	history1 480 0 118 2	history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 159 0 109 3 677	history1 480 0 118 2 701	history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	Current 159 0 109 3 677 1451	history1 480 0 118 2 701 1489	history2    
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	current           159           0           109           3           677           1451           755	history1 480 0 118 2 701 1489 727	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180	current           159           0           109           3           677           1451           755           867	history1 480 0 118 2 701 1489 727 872	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	Current 159 0 109 3 677 1451 755 867 2272	history1 480 0 118 2 701 1489 727 872 3118	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600	current 159 0 109 3 677 1451 755 867 2272 current	history1 480 0 118 2 701 1489 727 872 3118 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600	current           159           0           109           3           677           1451           755           867           2272           current           39	history1           480           0           118           2           701           1489           727           872           3118           history1           50	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	current           159           0           109           3           677           1451           755           867           2272           current           39           2	history1           480           0           118           2           701           1489           727           872           3118           history1           50           2	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	current           159           0           109           3           677           1451           755           867           2272           current           39           2           23	history1           480           0           118           2           701           1489           727           872           3118           history1           50           2           10	history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 -20 <b>limit/base</b>	current         159         0         109         3         677         1451         755         867         2272         current         39         2         23         current         0.2	history1         480         0         118         2         701         1489         727         872         3118         history1         50         2         10         history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b>	current         159         0         109         3         677         1451         755         867         2272         current         39         2         23         current	history1           480           0           118           2           701           1489           727           872           3118           history1           50           2           10           history1           0.1	history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sidium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	current         159         0         109         3         677         1451         755         867         2272         current         39         2         23         current         0.2         11.6	history1           480           0           118           2           701           1489           727           872           3118           history1           50           2           10           history1           0.1           6.4	history2   history2                           history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAM	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	method         ASTM D5185m         ASTM D7185M         *ASTM D7624         *ASTM D7415         method	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b> >3 >20 >30	current         159         0         109         3         677         1451         755         867         2272         current         39         2         23         current         0.2         11.6         24.3         current	history1         480         0         118         2         701         1489         727         872         3118         history1         50         2         10         history1         0.1         6.4         24.5         history1	history2   history2            history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	current         159         0         109         3         677         1451         755         867         2272         current         39         2         23         current         0.2         11.6         24.3	history1         480         0         118         2         701         1489         727         872         3118         history1         50         2         10         history1         0.1         6.4         24.5	history2                     history2            history2            history2            history2            history2            history2            history2            history2            history2            history2



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## **OIL ANALYSIS REPORT**





Certificate L2367

Contact/Location: MIKE LONGETTE - MILRUT