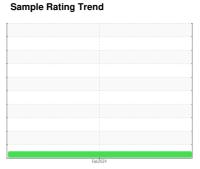


# **OIL ANALYSIS REPORT**



NORMAL



# Machine Id **2126953**

Component **Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (--- 0

### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

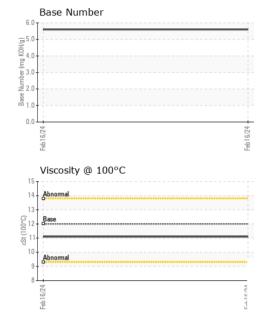
### **Fluid Condition**

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/bass current history1 history2	QTS)				Feb 2024		
Sample Date   Client Info   16 Feb 2024	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Date   Client Info   16 Feb 2024	Sample Number		Client Info		PCA0094600		
Machine Age         mls         Client Info         28896							
Oil Age         mls         Client Info         28996             Oil Changed Sample Status         Client Info         Changed             CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0             Water         WC Method         >0.2         NEG             Glycol         WC Method         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM DS185m         >100         22             Chromium         ppm         ASTM DS185m         >20         <1             Nickel         ppm         ASTM DS185m         >3         0             Silver         ppm         ASTM DS185m         >20         1             Lead         ppm         ASTM DS185m         >20         1             Copper         ppm	•	mls					
Oil Changed Sample Status         Client Info         Changed NORMAL             CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0             Water         WC Method         >0.2         NEG             Glycol         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         22             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         22             Chromium         ppm         ASTM D5185m         >20         -1             Silver         ppm         ASTM D5185m         >3         0             Silver         ppm         ASTM D5185m         >40         1							
Sample Status	-		Client Info		Changed		
Fuel					_		
Water         WC Method         >0.2         NEG             Glycol         WC Method         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         22             Chromium         ppm         ASTM D5185m         >20         <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0		
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         22             Chromium         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >4         4             Silver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >20         1             Lead         ppm         ASTM D5185m         >40         1             Copper         ppm         ASTM D5185m         >40         1             Vanadium         ppm         ASTM D5185m         0	Water		WC Method	>0.2	NEG		
Iron	Glycol		WC Method		NEG		
Chromium	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	22		
Titanium	Chromium	ppm	ASTM D5185m	>20	<1		
Silver	Nickel	ppm	ASTM D5185m	>4	4		
Aluminum	Titanium	ppm	ASTM D5185m		0		
Lead	Silver	ppm	ASTM D5185m	>3	0		
Copper         ppm         ASTM D5185m         >330         4             Tin         ppm         ASTM D5185m         >15         <1             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0             Barium         ppm         ASTM D5185m         0         0             Manganese         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         950         1056             Calcium         ppm         ASTM D5185m         995         1082             Phosphorus         ppm         ASTM D5185m         995         1082             Zinc         ppm         ASTM D5185m         2600         3025	Aluminum	ppm	ASTM D5185m	>20	1		
Tin	Lead	ppm	ASTM D5185m	>40	1		
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         <1	Copper	ppm	ASTM D5185m	>330	4		
Cadmium         ppm         ASTM D5185m         0            ADDITIVES         method         limit/base         current         history2           Boron         ppm         ASTM D5185m         2         < 1	Tin	ppm	ASTM D5185m	>15	<1		
ADDITIVES	Vanadium	ppm	ASTM D5185m		0		
Boron	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         50         64             Manganese         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         950         1056             Calcium         ppm         ASTM D5185m         1050         1234             Phosphorus         ppm         ASTM D5185m         995         1082             Zinc         ppm         ASTM D5185m         2600         3025             Sulfur         ppm         ASTM D5185m         2600         3025             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         <1             Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method	Boron	ppm	ASTM D5185m	2	<1		
Manganese         ppm         ASTM D5185m         0         <1	Barium	ppm	ASTM D5185m	0	0		
Magnesium         ppm         ASTM D5185m         950         1056             Calcium         ppm         ASTM D5185m         1050         1234             Phosphorus         ppm         ASTM D5185m         995         1082             Zinc         ppm         ASTM D5185m         1180         1380             Sulfur         ppm         ASTM D5185m         2600         3025             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         % ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7415         >30         20.8<	Molybdenum	ppm	ASTM D5185m	50	64		
Calcium         ppm         ASTM D5185m         1050         1234             Phosphorus         ppm         ASTM D5185m         995         1082             Zinc         ppm         ASTM D5185m         1180         1380             Sulfur         ppm         ASTM D5185m         2600         3025             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/.1mm         *ASTM D7415         >30         20.8             FLUID DEGRADATION         *ASTM D7414         >25 <t< th=""><th></th><th>ppm</th><th>ASTM D5185m</th><th>0</th><th>&lt;1</th><th></th><th></th></t<>		ppm	ASTM D5185m	0	<1		
Phosphorus         ppm         ASTM D5185m         995         1082             Zinc         ppm         ASTM D5185m         1180         1380             Sulfur         ppm         ASTM D5185m         2600         3025             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/.1mm         *ASTM D7415         >30         20.8             FLUID DEGRADATION         *ASTM D7414         >25         16.9             Oxidation         Abs/.1mm         *ASTM D7414         >	Magnesium	ppm	ASTM D5185m	950	1056		
Zinc         ppm         ASTM D5185m         1180         1380             Sulfur         ppm         ASTM D5185m         2600         3025             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         <1            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/.1mm         *ASTM D7624         >20         9.1             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25<	Calcium	ppm	ASTM D5185m	1050	1234		
Sulfur         ppm         ASTM D5185m         2600         3025             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2              Potassium         ppm         ASTM D5185m         >20         <1	Phosphorus	ppm	ASTM D5185m	995	1082		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7624         >20         9.1             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.9	Zinc	ppm	ASTM D5185m	1180	1380		
Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         <1	Sulfur	ppm	ASTM D5185m	2600	3025		
Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7624         >20         9.1             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.9	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         <1	Silicon	ppm	ASTM D5185m	>25	4		
INFRA-RED	Sodium	ppm	ASTM D5185m		2		
Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7624         >20         9.1             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.9	Potassium	ppm	ASTM D5185m	>20	<1		
Nitration         Abs/cm         *ASTM D7624         >20         9.1             Sulfation         *ASTM D7415         >30         20.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.9	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         20.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.9	Soot %	%	*ASTM D7844	>3	0.5		
FLUID DEGRADATION method limit/base current history1 history2       Oxidation     Abs/.1mm     *ASTM D7414 >25     16.9	Nitration	Abs/cm	*ASTM D7624	>20	9.1		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8		
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 5.6	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9		
	Base Number (BN)	mg KOH/g	ASTM D2896		5.6		



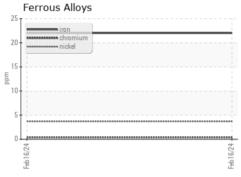
# **OIL ANALYSIS REPORT**



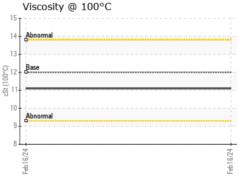
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
	DTIES	and the second	Parallella and		la facta a more	la la la ma O

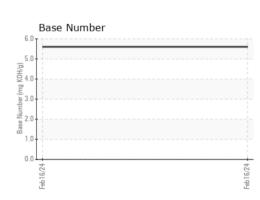
FLUID PROPE	RHES	method	limit/base		history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.1		

### **GRAPHS**



10	copper	
8-	**************************************	
6-	1	
4-		
2-	<u></u>	
0	- Feb 16/22 4	Feb 16/24









Certificate L2367

Laboratory Sample No.

: PCA0094600 Lab Number : 06107924 Unique Number : 10911421 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 04 Mar 2024 **Tested** : 05 Mar 2024

Diagnosed : 05 Mar 2024 - Wes Davis **PERDUE FARMS - WASHINGTON** P.O. BOX 539 WASHINGTON, IN US 47501

Contact: DEREK RYAN derek.ryan@perdue.com T: (812)257-3023

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)