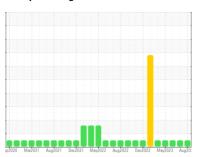
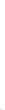


# **OIL ANALYSIS REPORT**

### **Sample Rating Trend**









## PETRO CANADA DURON SHP 15W40 (9 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

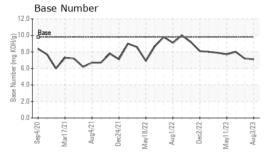
## **Fluid Condition**

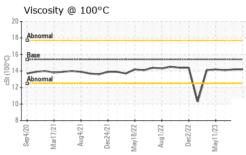
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

`		ip 2020 Mar 20	21 Aug2021 Dec2021	May2022 Aug2022 Dec2022 May	2023 Aug20:	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0102961	PCA0095297	PCA0098115
Sample Date		Client Info		03 Aug 2023	27 Jul 2023	08 Jun 2023
Machine Age	hrs	Client Info		10499	10429	10047
Oil Age	hrs	Client Info		452	382	294
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	20	17	8
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>5	2	4	4
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	<1
Lead	ppm	ASTM D5185m	>40	2	1	<1
Copper	ppm	ASTM D5185m	>330	3	4	3
Tin	ppm	ASTM D5185m	>15	2	2	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	1
Boron Barium	ppm	ASTM D5185m ASTM D5185m		0 2	0	1 2
Barium	ppm	ASTM D5185m	0	2	1	2
Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	0	2 63	1 63	2 69
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0	2 63 <1	1 63 <1	2 69 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010	2 63 <1 950	1 63 <1 946	2 69 <1 958
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070	2 63 <1 950 1085	1 63 <1 946 1089	2 69 <1 958 1114
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150	2 63 <1 950 1085 936	1 63 <1 946 1089 934	2 69 <1 958 1114 1040
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270	2 63 <1 950 1085 936 1209	1 63 <1 946 1089 934 1211	2 69 <1 958 1114 1040 1279
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	2 63 <1 950 1085 936 1209 2513	1 63 <1 946 1089 934 1211 2537	2 69 <1 958 1114 1040 1279 3473
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	2 63 <1 950 1085 936 1209 2513	1 63 <1 946 1089 934 1211 2537 history1 5	2 69 <1 958 1114 1040 1279 3473 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	2 63 <1 950 1085 936 1209 2513 current	1 63 <1 946 1089 934 1211 2537 history1	2 69 <1 958 1114 1040 1279 3473 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base	2 63 <1 950 1085 936 1209 2513 current 5	1 63 <1 946 1089 934 1211 2537 history1 5	2 69 <1 958 1114 1040 1279 3473 history2 4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	2 63 <1 950 1085 936 1209 2513 current 5 14	1 63 <1 946 1089 934 1211 2537 history1 5 13	2 69 <1 958 1114 1040 1279 3473 history2 4 9
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	2 63 <1 950 1085 936 1209 2513 current 5 14 3	1 63 <1 946 1089 934 1211 2537 history1 5 13 3	2 69 <1 958 1114 1040 1279 3473 history2 4 9 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	2 63 <1 950 1085 936 1209 2513 current 5 14 3	1 63 <1 946 1089 934 1211 2537 history1 5 13 3 history1 1.1	2 69 <1 958 1114 1040 1279 3473 history2 4 9 2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m  *ASTM D5185m ASTM D76185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20	2 63 <1 950 1085 936 1209 2513 current 5 14 3 current 1.3	1 63 <1 946 1089 934 1211 2537 history1 5 13 3 history1 1.1 8.9	2 69 <1 958 1114 1040 1279 3473 history2 4 9 2 history2 0.5 6.8
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m  *ASTM D5185m ASTM D76185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	2 63 <1 950 1085 936 1209 2513 current 5 14 3 current 1.3 9.2 21.6	1 63 <1 946 1089 934 1211 2537 history1 5 13 3 history1 1.1 8.9 21.0	2 69 <1 958 1114 1040 1279 3473 history2 4 9 2 history2 0.5 6.8 20.1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m  Method ASTM D5185m ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  Method  *ASTM D7844  *ASTM D7844  *ASTM D7844  *ASTM D7844	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30 limit/base	2 63 <1 950 1085 936 1209 2513 current 5 14 3 current 1.3 9.2 21.6 current	1 63 <1 946 1089 934 1211 2537 history1 5 13 3 history1 1.1 8.9 21.0 history1	2 69 <1 958 1114 1040 1279 3473 history2 4 9 2 history2 0.5 6.8 20.1



## **OIL ANALYSIS REPORT**

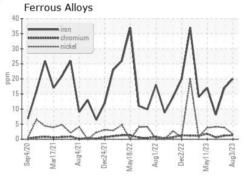


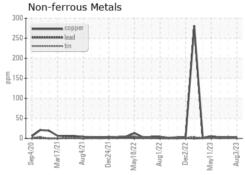


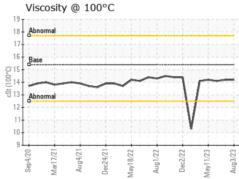
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

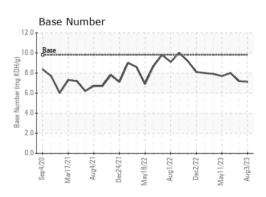
FLUID PROPE	RHES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	14.2	14.1

## **GRAPHS**













Certificate L2367

Laboratory Sample No.

Lab Number **Unique Number** 

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0102961 : 05921292 : 10593206

Received Diagnosed

: 10 Aug 2023 : 11 Aug 2023

Diagnostician : Sean Felton

LRS - BETHEL HEIGHTS (NWA AR)

848 HWY 264 E BETHEL HEIGHTS, AR US 72764

Contact: ROBERT HEATH rheath@Irsrecycles.com T: (479)305-8958

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)

Report Id: ORIBET [WUSCAR] 05921292 (Generated: 08/11/2023 14:48:17) Rev: 1

Submitted By: ALSO ORIVANAR ORIHAR ORITOP - JAMIE HAYWORTH

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