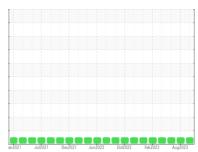


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 20017 Component Diesel Engine Fluid 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

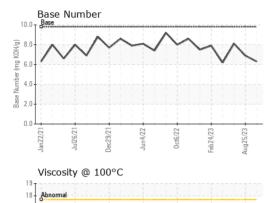
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number) 0 - 100 (100)	J GAL)	an2021 Ji	ul2021 Dec2021 Jui	12022 Oct2022 Feb2023	Aug2023	
Sample Date	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 15995 14023 13603 Oil Age hrs Client Info 703 420 272 Oil Changed Client Info Changed Not Changd	Sample Number		Client Info		PCA0106024	PCA0102981	PCA0098108
Oil Age hrs Client Info 703 420 272 Oil Changed Sample Status Client Info Changed Not Change	Sample Date		Client Info		23 Oct 2023	25 Aug 2023	22 Jun 2023
Client Info Changed Not Changed NORMAL NORMAL NORMAL	Machine Age	hrs	Client Info		15995	14023	13603
Sample Status	Oil Age	hrs	Client Info		703	420	272
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 10 7 1 Chromium ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 2 1 0 Copper ppm ASTM D5185m >40 4 2 0 Copper ppm ASTM D5185m >40 4 2 0 Copper ppm ASTM D5185m 0 2 1 1 0 <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>-</th> <th>Not Changd</th> <th>Not Changd</th>	Oil Changed		Client Info		-	Not Changd	Not Changd
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 10 7 1 Chromium ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 2 1 0 0 Aluminum ppm ASTM D5185m >20 2 1 0 0 Aluminum ppm ASTM D5185m >20 2 1 0 0 Lead ppm ASTM D5185m >20 2 1 0 0 Copper ppm ASTM D5185m >15 <1 <1 0 0 Cadadium ppm ASTM D5185m 0 <2 <1 <1 0 Molybdenum </th <th>Fuel</th> <th></th> <th>WC Method</th> <th>>3.0</th> <th><1.0</th> <th><1.0</th> <th><1.0</th>	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>120	10	7	1
Description	Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Silver ppm ASTM D5185m >2 <1 0 0 Aluminum ppm ASTM D5185m >20 2 1 0 Lead ppm ASTM D5185m >40 4 2 0 Copper ppm ASTM D5185m >330 1 1 0 Tin ppm ASTM D5185m >15 <1 <1 0 Vanadium ppm ASTM D5185m 0 <1 0 <1 0 Cadmium ppm ASTM D5185m 0 <1 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 <1 <1 Barium ppm ASTM D5185m 0 4 0 0 0 Molybdenum ppm ASTM D5185m 0 4 0 0 55 Mangnesium ppm ASTM D5185	Nickel	ppm	ASTM D5185m	>5	3	3	<1
Aluminum ppm ASTM D5185m >20 2 1 0 Lead ppm ASTM D5185m >40 4 2 0 Copper ppm ASTM D5185m >330 1 1 0 Tin ppm ASTM D5185m >15 <1	Titanium	ppm	ASTM D5185m	>2	0	0	0
Lead ppm ASTM D5185m >40 4 2 0 Copper ppm ASTM D5185m >330 1 1 0 Tin ppm ASTM D5185m >15 <1	Silver	ppm	ASTM D5185m	>2		0	0
Copper ppm ASTM D5185m >330 1 1 0 Tin ppm ASTM D5185m >15 <1	Aluminum	ppm	ASTM D5185m	>20	2	1	0
Tin	Lead	ppm	ASTM D5185m	>40	4	2	0
Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 <1 <1 Barium ppm ASTM D5185m 0 4 0 0 Molybdenum ppm ASTM D5185m 0 4 0 0 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 1132 1069 872 Calcium ppm ASTM D5185m 1070 1300 1188 965 Phosphorus ppm ASTM D5185m 1270 1439 1319 1102 Sulfur ppm ASTM D5185m 2060 3564 3349 3394 CONTAMINANTS method limit/base current history1	Copper	ppm	ASTM D5185m	>330	1	1	0
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 <1	Tin	ppm	ASTM D5185m	>15	<1	<1	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 <1	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 0 4 0 0 Molybdenum ppm ASTM D5185m 60 80 69 55 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 1132 1069 872 Calcium ppm ASTM D5185m 1070 1300 1188 965 Phosphorus ppm ASTM D5185m 1150 1226 1067 894 Zinc ppm ASTM D5185m 1270 1439 1319 1102 Sulfur ppm ASTM D5185m 2060 3564 3349 3394 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 2 Sodium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base<	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 80 69 55 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	0	2	<1	<1
Manganese ppm ASTM D5185m 0 <1	Barium	ppm	ASTM D5185m	0	4	0	0
Magnesium ppm ASTM D5185m 1010 1132 1069 872 Calcium ppm ASTM D5185m 1070 1300 1188 965 Phosphorus ppm ASTM D5185m 1150 1226 1067 894 Zinc ppm ASTM D5185m 1270 1439 1319 1102 Sulfur ppm ASTM D5185m 2060 3564 3349 3394 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 2 Sodium ppm ASTM D5185m 13 13 13 5 Potassium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7415	Molybdenum	ppm	ASTM D5185m	60	80	69	55
Calcium ppm ASTM D5185m 1070 1300 1188 965 Phosphorus ppm ASTM D5185m 1150 1226 1067 894 Zinc ppm ASTM D5185m 1270 1439 1319 1102 Sulfur ppm ASTM D5185m 2060 3564 3349 3394 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 2 Sodium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION <t< td=""><th>Manganese</th><td>ppm</td><td>ASTM D5185m</td><td>0</td><th><1</th><td><1</td><td>0</td></t<>	Manganese	ppm	ASTM D5185m	0	<1	<1	0
Phosphorus ppm ASTM D5185m 1150 1226 1067 894 Zinc ppm ASTM D5185m 1270 1439 1319 1102 Sulfur ppm ASTM D5185m 2060 3564 3349 3394 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 2 Sodium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/	Magnesium	ppm	ASTM D5185m	1010	1132	1069	872
Zinc ppm ASTM D5185m 1270 1439 1319 1102 Sulfur ppm ASTM D5185m 2060 3564 3349 3394 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 2 Sodium ppm ASTM D5185m 13 13 5 Potassium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414	Calcium	ppm	ASTM D5185m	1070	1300	1188	965
Sulfur ppm ASTM D5185m 2060 3564 3349 3394 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 2 Sodium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0	Phosphorus	ppm	ASTM D5185m	1150	1226	1067	894
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 5 2 Sodium ppm ASTM D5185m 13 13 5 Potassium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0	Zinc	ppm	ASTM D5185m	1270	1439	1319	1102
Silicon ppm ASTM D5185m >25 6 5 2 Sodium ppm ASTM D5185m 13 13 5 Potassium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0			ASTM D5185m	2060	3564	3349	3394
Sodium ppm ASTM D5185m 13 13 5 Potassium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 3 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0		ppm	ASTM D5185m	>25			
INFRA-RED	Sodium	ppm	ASTM D5185m			13	5
Soot % % *ASTM D7844 >4 0.5 0.5 0.2 Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0	Potassium	ppm	ASTM D5185m	>20	3	0	0
Nitration Abs/cm *ASTM D7624 >20 9.7 8.9 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 22.2 21.0 19.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0	Soot %	%	*ASTM D7844	>4		0.5	0.2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0	Nitration	Abs/cm	*ASTM D7624	>20	9.7	8.9	6.8
Oxidation Abs/.1mm *ASTM D7414 >25 19.0 17.6 16.0	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	21.0	19.4
	FLUID DEGRAD	OATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 6.3 6.9 8.1	Oxidation	Abs/.1mm	*ASTM D7414	>25	19.0	17.6	16.0
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.3	6.9	8.1



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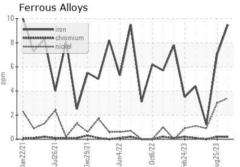
OIL ANALYSIS REPORT

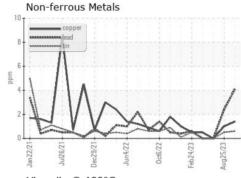


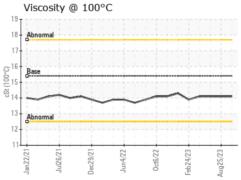
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

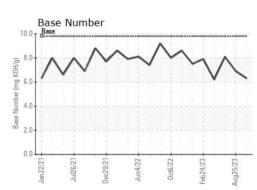
FLUID PROPE	RHES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	14.1	14.1

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number **Unique Number** Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0106024 : 05994985 : 10723345

Received Diagnosed Diagnostician : Wes Davis

: 31 Oct 2023 : 01 Nov 2023

848 HWY 264 E BETHEL HEIGHTS, AR US 72764

LRS - BETHEL HEIGHTS (NWA AR)

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] 05994985 (Generated: 11/01/2023 18:51:17) Rev: 1

Submitted By: ALSO ORIVANAR ORIHAR ORITOP - JAMIE HAYWORTH

F: