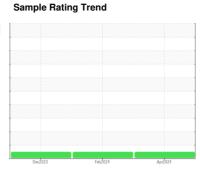


OIL ANALYSIS REPORT

(P1021274) Dixon Transport-Tractor [Dixon Transport-Tractor] 325A325535

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

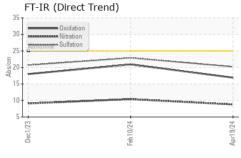
Fluid Condition

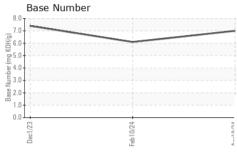
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

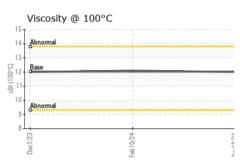
Sample Number Client Info PCA0121209 PCA0114333 PCA01094 PCA0114334 PCA01094 PCA01094 PCA0114334 PCA01094 PCA01094 PCA0114334 PCA01094 PCA0							
Sample Date Client Info 19 Apr 2024 10 Feb 2024 01 Dec 2024 Machine Age mls Client Info 514841 491368 474146 23203 37176 20006 2	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Client Info	Sample Number		Client Info		PCA0121209	PCA0114333	PCA0109471
Oil Age mls Client Info 23203 37176 20003 Oil Changed Sample Status Client Info Not Changd Nor Change Nor Change Nor Change Nor Change Nor MAL Not Change Nor	Sample Date		Client Info		19 Apr 2024	10 Feb 2024	01 Dec 2023
Oil Age mls Client Info 23203 37176 20003 Oil Changed Sample Status Client Info Not Changd Nor Change Nor Change Nor Change Nor Change Nor MAL Not Change Nor	Machine Age	mls	Client Info		514841	491368	474146
Oil Changed Sample Status Client Info Not Changed NORMAL Not Changed NorMS Not Changed NorMS Not Changed NorMS Not Change		mls	Client Info		23203	37176	20003
NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 hi	-		Client Info		Not Changd	Changed	Not Changd
Fuel	-				NORMAL		NORMAL
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Image: NEG NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >80 27 40 27 Chromium ppm ASTM D5185m >5 3 4 2 Nickel ppm ASTM D5185m >2 <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Irron	Glycol		WC Method		NEG	NEG	NEG
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>80	27	40	27
Titanium	Chromium	ppm	ASTM D5185m	>5	3	4	2
Silver	Nickel	ppm	ASTM D5185m	>2	<1	1	<1
Aluminum	Titanium	ppm	ASTM D5185m		<1	0	0
Lead	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper ppm ASTM D5185m >150 7 14 11 Tin ppm ASTM D5185m >5 <1	Aluminum	ppm	ASTM D5185m	>30	9	15	7
Tin	Lead	ppm	ASTM D5185m	>30	0	1	0
Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 2 3 0 <1 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 59 63 58 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 950 1007 1046 1063 Calcium ppm ASTM D5185m 950 1081 1106 1117 Zinc ppm ASTM D5185m 995 1081 1106 1117 Zinc ppm ASTM D5185m 2600 3492 2516 2890 CONTAMINANTS method limit/base current history1<	Copper	ppm	ASTM D5185m	>150	7	14	11
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 2 3 0 <1	Tin	ppm	ASTM D5185m	>5	<1	<1	0
ADDITIVES method limit/base current history1 history Boron ppm ASTM D5185m 2 3 0 <1	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron ppm ASTM D5185m 2 3 0 0 0 0 0 0 0 0 0	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 59 63 58 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 59 63 58 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 950 1007 1046 1063 Calcium ppm ASTM D5185m 1050 1141 1200 1202 Phosphorus ppm ASTM D5185m 995 1081 1106 1117 Zinc ppm ASTM D5185m 995 1081 1358 1279 Sulfur ppm ASTM D5185m 2600 3492 2516 2890 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m >20 0 2 1 INFRA-RED method limit/base	Boron	ppm	ASTM D5185m	2	3	0	<1
Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 950 1007 1046 1063 Calcium ppm ASTM D5185m 1050 1141 1200 1202 Phosphorus ppm ASTM D5185m 995 1081 1106 1117 Zinc ppm ASTM D5185m 1180 1318 1358 1279 Sulfur ppm ASTM D5185m 2600 3492 2516 2890 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m 3 4 <1	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 950 1007 1046 1063 Calcium ppm ASTM D5185m 1050 1141 1200 1202 Phosphorus ppm ASTM D5185m 995 1081 1106 1117 Zinc ppm ASTM D5185m 1180 1318 1358 1279 Sulfur ppm ASTM D5185m 2600 3492 2516 2890 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m >20 0 2 1 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.5 0.8 0.5 Nitration Abs/.1mm *ASTM D7624 >20 8.8 10.4 9.1 Sulfation Abs/.1mm	Molybdenum	ppm	ASTM D5185m	50	59	63	58
Calcium ppm ASTM D5185m 1050 1141 1200 1202 Phosphorus ppm ASTM D5185m 995 1081 1106 1117 Zinc ppm ASTM D5185m 1180 1318 1358 1279 Sulfur ppm ASTM D5185m 2600 3492 2516 2890 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m >20 0 2 1 Potassium ppm ASTM D5185m >20 0 2 1 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.5 0.8 0.5 Nitration Abs/.1mm *ASTM D7415 >30 20.2 22.9 20.7 FLUID DEGRADATION method </td <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th><1</th> <td><1</td> <td>0</td>	Manganese	ppm	ASTM D5185m	0	<1	<1	0
Phosphorus ppm ASTM D5185m 995 1081 1106 1117 Zinc ppm ASTM D5185m 1180 1318 1358 1279 Sulfur ppm ASTM D5185m 2600 3492 2516 2890 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m 3 4 <1	Magnesium	ppm	ASTM D5185m	950	1007	1046	1063
Zinc ppm ASTM D5185m 1180 1318 1358 1279 Sulfur ppm ASTM D5185m 2600 3492 2516 2890 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m 3 4 <1	Calcium	ppm	ASTM D5185m	1050	1141	1200	1202
Sulfur ppm ASTM D5185m 2600 3492 2516 2890 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m 3 4 <1	Phosphorus	ppm	ASTM D5185m	995	1081	1106	1117
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m 3 4 <1	Zinc	ppm	ASTM D5185m	1180	1318	1358	1279
Silicon ppm ASTM D5185m >20 5 6 5 Sodium ppm ASTM D5185m 3 4 <1 Potassium ppm ASTM D5185m >20 0 2 1 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.5 0.8 0.5 Nitration Abs/cm *ASTM D7624 >20 8.8 10.4 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 22.9 20.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 16.9 20.9 18.0	Sulfur	ppm	ASTM D5185m	2600	3492	2516	2890
Sodium ppm ASTM D5185m 3 4 <1 Potassium ppm ASTM D5185m >20 0 2 1 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 0.5 0.8 0.5 Nitration Abs/cm *ASTM D7624 >20 8.8 10.4 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 22.9 20.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 20.9 18.0	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 2 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.8 0.5 Nitration Abs/cm *ASTM D7624 >20 8.8 10.4 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 22.9 20.7 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 20.9 18.0	Silicon	ppm	ASTM D5185m	>20	5	6	5
INFRA-RED	Sodium	ppm	ASTM D5185m		3	4	<1
Soot % % *ASTM D7844 >3 0.5 0.8 0.5 Nitration Abs/cm *ASTM D7624 >20 8.8 10.4 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 22.9 20.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 16.9 20.9 18.0	Potassium	ppm	ASTM D5185m	>20	0	2	1
Nitration Abs/cm *ASTM D7624 >20 8.8 10.4 9.1 Sulfation Abs/.1mm *ASTM D7615 >30 20.2 22.9 20.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 16.9 20.9 18.0	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.2 22.9 20.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 16.9 20.9 18.0	Soot %	%	*ASTM D7844	>3	0.5	0.8	0.5
FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 16.9 20.9 18.0	Nitration	Abs/cm	*ASTM D7624	>20	8.8	10.4	9.1
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2	22.9	20.7
	FLUID DEGRA	OITAC	method	limit/base	current	history1	history2
Rasa Number (RN) mg KOH/g ASTM D2896 7.0 6.1 7.4	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	20.9	18.0
Dasc Number (DIV) Higherty Activide 2000 7.4	Base Number (BN)	mg KOH/g	ASTM D2896		7.0	6.1	7.4



OIL ANALYSIS REPORT



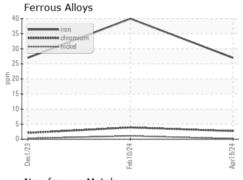


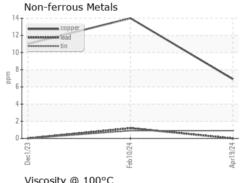


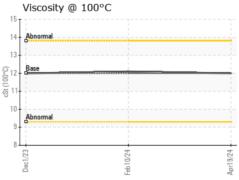
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

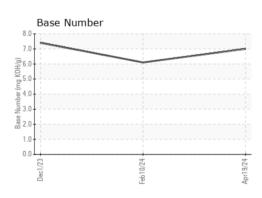
FLUID PROP	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	12.00	12.0	12.1	12.0

GRAPHS













Laboratory Sample No. Lab Number : 06161160 Unique Number : 10996583

: PCA0121209

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 26 Apr 2024 **Tested** : 26 Apr 2024 Diagnosed

: 26 Apr 2024 - Wes Davis

1124 E. River Road Dixon, IL US 61021 Contact: Mike Shoemaker

Shop3250@transervice.com

Transervice - Shop 3250 - Dixon Transport

Test Package : FLEET Certificate 12367 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: TSV3250 [WUSCAR] 06161160 (Generated: 04/26/2024 16:34:02) Rev: 1

Submitted By: Mike Shoemaker

T:

F: