

OIL ANALYSIS REPORT

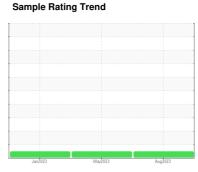


(63532PC) Feldman Lumber-Tractor [Feldman Lumber-Tractor] 196D522

Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

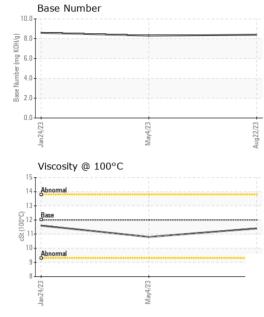
Fluid Condition

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

SAMPLE INFORMATION method	<u> </u>		Jar	2023	May2023 Aug20	23	
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 67696 64843 61903 Oil Age mis Client Info 2853 2940 3835 Oil Changed Client Info Changed Changed Changed Changed Sample Status MORMAL NORMAL NORMAL NORMAL NORMAL Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method >5 <1.0 <1.0 <1.0 WEAR METALS method fimit/base current history1 history2 Iron ppm ASTM 05185m >80 6 11 17 Chromium ppm ASTM 05185m >5 <1 2 4 Nickel ppm ASTM 05185m >2 0 0 0 Silver ppm ASTM 05185m >3 0 0 0 Copper ppm ASTM 05185m >30 0 0 0 Copper </th <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>PCA0098296</th> <th>PCA0089308</th> <th>PCA0089323</th>	Sample Number		Client Info		PCA0098296	PCA0089308	PCA0089323
Oil Age mls Client Info 2853 2940 3835 Oil Changed Sample Status Client Info Changed	Sample Date		Client Info		22 Aug 2023	04 May 2023	24 Jan 2023
Oil Changed Sample Status Client Info Changed NORMAL Changed NoRMANAL Changed NoRMANAL Changed NoRMANAL	Machine Age	mls	Client Info		67696	64843	61903
Sample Status	Oil Age	mls	Client Info		2853	2940	3835
Fuel	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imitibase current history1 history2 WEAR METALS method limitibase current history1 history2 Iron ppm ASTM D5185m >5 <1 2 4 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >30 0 0 0 Silver ppm ASTM D5185m >30 0 0 0 Aluminum ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >5 <1 <1 <1 Vanadium ppm ASTM D5185m >5 <1 <1 <1 Cadmium ppm ASTM D5185m >5 <1 <1 <1	CONTAMINATI	ON	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >80 6 11 17 Chromium ppm ASTM D5185m >5 <1	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >5 <1	WEAR METALS	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>80	6	11	17
Titanium	Chromium	ppm	ASTM D5185m	>5	<1	2	4
Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >30 2 13 43 Lead ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >150 10 1 1 Tin ppm ASTM D5185m >5 <1 <1 <1 Vanadium ppm ASTM D5185m <1 0 <1 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 </td <td>Nickel</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>2</td> <th>0</th> <td>0</td> <td>0</td>	Nickel	ppm	ASTM D5185m	>2	0	0	0
Aluminum ppm ASTM D5185m >30 2 13 43 Lead ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >150 10 1 1 Tin ppm ASTM D5185m >5 <1	Titanium	ppm	ASTM D5185m		0	0	<1
Lead ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >150 10 1 1 Tin ppm ASTM D5185m >5 <1 <1 <1 Vanadium ppm ASTM D5185m <1 <1 <1 <1 Vanadium ppm ASTM D5185m <1 <1 <1 <1 Vanadium ppm ASTM D5185m <1 <1 <1 <1 Cadmium ppm ASTM D5185m 0 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 19 9 22 Barium ppm ASTM D5185m 0 0 0 0 0 Magnese ppm ASTM D5185m 50 859 858 811 Calcium ppm ASTM D5185m 1050	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper ppm ASTM D5185m >150 10 1 1 Tin ppm ASTM D5185m >5 <1	Aluminum	ppm	ASTM D5185m	>30	2	13	43
Tin ppm ASTM D5185m >5 <1 <1 <1 Vanadium ppm ASTM D5185m <1 0 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 19 9 22 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 50 58 57 56 Manganese ppm ASTM D5185m 0 0 <1 1 Magnesium ppm ASTM D5185m 950 859 858 811 Calcium ppm ASTM D5185m 1050 967 1100 1188 Phosphorus ppm ASTM D5185m 180 1106 1163 1123 Sulfur ppm ASTM D5185m 2600 2899 3	Lead	ppm	ASTM D5185m	>30	0	0	0
Vanadium ppm ASTM D5185m <1 0 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 19 9 22 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 58 57 56 Manganese ppm ASTM D5185m 0 0 <1 1 Magnesium ppm ASTM D5185m 950 859 858 811 Calcium ppm ASTM D5185m 1050 967 1100 1188 Phosphorus ppm ASTM D5185m 180 1106 1163 1123 Sulfur ppm ASTM D5185m 2600 2899 3366 3132 CONTAMINANTS method limit/base current history1<	Copper	ppm	ASTM D5185m	>150	10	1	1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 19 9 22 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 58 57 56 Manganese ppm ASTM D5185m 0 0 <1	Tin	ppm	ASTM D5185m	>5	<1	<1	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	0	<1
Boron ppm ASTM D5185m 2 19 9 22 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 58 57 56 Manganese ppm ASTM D5185m 0 0 <1 1 Magnesium ppm ASTM D5185m 950 859 858 811 Calcium ppm ASTM D5185m 1050 967 1100 1188 Phosphorus ppm ASTM D5185m 995 878 911 910 Zinc ppm ASTM D5185m 1180 1106 1163 1123 Sulfur ppm ASTM D5185m 2600 2899 3366 3132 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 58 57 56 Manganese ppm ASTM D5185m 0 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 58 57 56 Manganese ppm ASTM D5185m 0 0 <1 1 Magnesium ppm ASTM D5185m 950 859 858 811 Calcium ppm ASTM D5185m 1050 967 1100 1188 Phosphorus ppm ASTM D5185m 995 878 911 910 Zinc ppm ASTM D5185m 2600 2899 3366 3132 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20 0 13 53 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 >3 0.3	Boron	ppm	ASTM D5185m	2	19	9	22
Manganese ppm ASTM D5185m 0 0 <1 1 Magnesium ppm ASTM D5185m 950 859 858 811 Calcium ppm ASTM D5185m 1050 967 1100 1188 Phosphorus ppm ASTM D5185m 995 878 911 910 Zinc ppm ASTM D5185m 1180 1106 1163 1123 Sulfur ppm ASTM D5185m 2600 2899 3366 3132 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20 0 13 53 INFRA-RED method limit/base current history1 history2 Soot % % STM D7844 >3 0.3 <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>0</th> <td>0</td> <td>0</td>	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 950 859 858 811 Calcium ppm ASTM D5185m 1050 967 1100 1188 Phosphorus ppm ASTM D5185m 995 878 911 910 Zinc ppm ASTM D5185m 1180 1106 1163 1123 Sulfur ppm ASTM D5185m 2600 2899 3366 3132 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20 4 3 53 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION *ASTM D7414	Molybdenum	ppm	ASTM D5185m	50	58	57	56
Calcium ppm ASTM D5185m 1050 967 1100 1188 Phosphorus ppm ASTM D5185m 995 878 911 910 Zinc ppm ASTM D5185m 1180 1106 1163 1123 Sulfur ppm ASTM D5185m 2600 2899 3366 3132 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20 0 13 53 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION <td< td=""><td>Manganese</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><th>0</th><td><1</td><td>1</td></td<>	Manganese	ppm	ASTM D5185m	0	0	<1	1
Phosphorus ppm ASTM D5185m 995 878 911 910 Zinc ppm ASTM D5185m 1180 1106 1163 1123 Sulfur ppm ASTM D5185m 2600 2899 3366 3132 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20 0 13 53 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.	Magnesium	ppm	ASTM D5185m	950	859	858	811
Zinc ppm ASTM D5185m 1180 1106 1163 1123 Sulfur ppm ASTM D5185m 2600 2899 3366 3132 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20 0 13 53 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	Calcium	ppm	ASTM D5185m	1050	967	1100	1188
Sulfur ppm ASTM D5185m 2600 2899 3366 3132 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m >20 1 1 1 Potassium ppm ASTM D5185m >20 0 13 53 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	Phosphorus	ppm	ASTM D5185m	995	878	911	910
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m <1	Zinc	ppm	ASTM D5185m	1180	1106	1163	1123
Silicon ppm ASTM D5185m >20 4 3 6 Sodium ppm ASTM D5185m <1 1 1 Potassium ppm ASTM D5185m >20 0 13 53 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	Sulfur	ppm	ASTM D5185m	2600	2899	3366	3132
Sodium ppm ASTM D5185m <1 1 1 Potassium ppm ASTM D5185m >20 0 13 53 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 13 53 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	Silicon	ppm		>20	4		
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	Sodium	ppm	ASTM D5185m		<1	1	1
Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	Potassium	ppm	ASTM D5185m	>20	0	13	53
Nitration Abs/cm *ASTM D7624 >20 6.8 7.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.9 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	Soot %	%	*ASTM D7844	>3	0.3	0.2	0.3
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	Nitration	Abs/cm	*ASTM D7624	>20	6.8	7.2	8.1
Oxidation Abs/.1mm *ASTM D7414 >25 13.5 13.2 13.8	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	17.9	18.2
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 8.4 8.3 8.6	Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	13.2	13.8
	Base Number (BN)	mg KOH/g	ASTM D2896		8.4	8.3	8.6



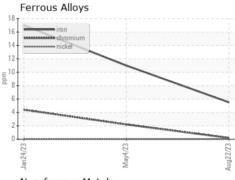
OIL ANALYSIS REPORT

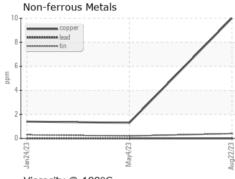


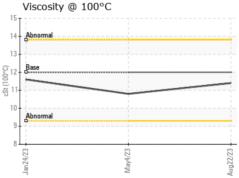
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

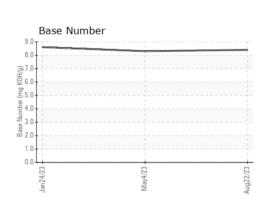
FLUID PROPE	RHES	method	ilmit/base		nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	12.00	11.4	10.8	11.6

GRAPHS











Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10778323

: 06028532

: PCA0098296 Test Package : FLEET

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 07 Dec 2023 Diagnosed

: 09 Dec 2023 Diagnostician : Wes Davis

Transervice - Shop 1960 - Feldman Lumber Service 1281 Metropolitan Avenue

Brooklyn, NY US 11237

Contact: Marc Fried mfried@transervice.com

T: F:

* - 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)