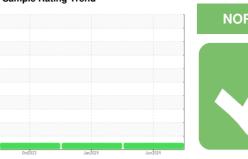


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id
BM-110
Component
Diesel Engine
Fluid

PETRO CANADA DURON SHP 10W30 (10 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

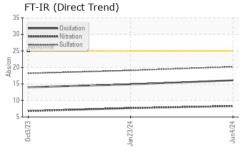
Fluid Condition

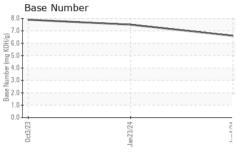
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

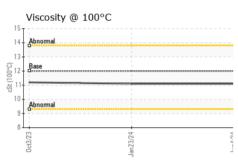
Client Info Q4 Jun 2024 23 Jan 2024 03 Oct 2023	0.4401.5.11500						
Client Info	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 229311 206894 189655 Oil Age mls Client Info 22417 17239 152655 Oil Changed Client Info Changed Changed Changed Changed Changed Changed Changed NoRMAL 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 <	Sample Number		Client Info		PCA0122189	PCA0114056	PCA0103133
Oil Age mls Client Info 22417 17239 152655 Oil Changed Client Info Changed C	Sample Date		Client Info		04 Jun 2024	23 Jan 2024	03 Oct 2023
Oil Changed Sample Status Client Info Changed NORMAL Change NoRMS Change NoRMS Change NoRMS Change NoEG Change NEG Change NEG Change NEG Change NEG NEG NEG <t< td=""><td>Machine Age</td><td>mls</td><td>Client Info</td><td></td><th>229311</th><td>206894</td><td>189655</td></t<>	Machine Age	mls	Client Info		229311	206894	189655
NORMAL NORMAL NORMAL CONTAMINATION method minit/base current history1 history2	Oil Age	mls	Client Info		22417	17239	152655
Fuel	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 18 13 7 Chromium ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >5 2 <1 0 Silver ppm ASTM D5185m >2 <1 <1 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 12 17 4 Lead ppm ASTM D5185m >40 <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<	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Part	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >5 2 <1 0 Titanium ppm ASTM D5185m >2 <1 <1 0 Silver ppm ASTM D5185m >2 <1 <1 0 Aluminum ppm ASTM D5185m >20 12 17 4 Lead ppm ASTM D5185m >20 1 1 1 1 Copper ppm ASTM D5185m 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>120	18	13	7
Titanium	Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Silver	Nickel	ppm	ASTM D5185m	>5	2	<1	0
Aluminum ppm ASTM D5185m >20 12 17 4 Lead ppm ASTM D5185m >40 <1	Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Lead	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >330 2 2 1 Tin ppm ASTM D5185m >15 <1	Aluminum	ppm	ASTM D5185m	>20	12	17	4
Tin	Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 0 0 Barium ppm ASTM D5185m 0 1 0 0 Molybdenum ppm ASTM D5185m 50 66 55 61 Manganese ppm ASTM D5185m 95 965 968 994 Calcium ppm ASTM D5185m 1050 1162 1040 1096 Phosphorus ppm ASTM D5185m 1050 1162 1040 1006 Zinc ppm ASTM D5185m 295 1013 1004 1006 Zinc ppm ASTM D5185m 2600 3225 2809 3077 CONTAMINANTS method limit/base current history1	Copper	ppm	ASTM D5185m	>330	2	2	1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 0 0 Barium ppm ASTM D5185m 0 1 0 0 Molybdenum ppm ASTM D5185m 50 66 55 61 Manganese ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>15	<1	<1	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron ppm ASTM D5185m 2 0 0 0 0 0 0 0 0 0	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 1 0 0 Molybdenum ppm ASTM D5185m 50 66 55 61 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 66 55 61 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 950 965 968 994 Calcium ppm ASTM D5185m 1050 1162 1040 1096 Phosphorus ppm ASTM D5185m 995 1013 1004 1006 Zinc ppm ASTM D5185m 1180 1326 1181 1262 Sulfur ppm ASTM D5185m 2600 3225 2809 3077 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 3 Sodium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 >4	Boron	ppm	ASTM D5185m	2	0	0	0
Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 950 965 968 994 Calcium ppm ASTM D5185m 1050 1162 1040 1096 Phosphorus ppm ASTM D5185m 995 1013 1004 1006 Zinc ppm ASTM D5185m 1180 1326 1181 1262 Sulfur ppm ASTM D5185m 2600 3225 2809 3077 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 3 Sodium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/:1mm *ASTM	Barium	ppm	ASTM D5185m	0	1	0	0
Magnesium ppm ASTM D5185m 950 965 968 994 Calcium ppm ASTM D5185m 1050 1162 1040 1096 Phosphorus ppm ASTM D5185m 995 1013 1004 1006 Zinc ppm ASTM D5185m 1180 1326 1181 1262 Sulfur ppm ASTM D5185m 2600 3225 2809 3077 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 3 Sodium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D74	Molybdenum	ppm	ASTM D5185m	50	66	55	61
Calcium ppm ASTM D5185m 1050 1162 1040 1096 Phosphorus ppm ASTM D5185m 995 1013 1004 1006 Zinc ppm ASTM D5185m 1180 1326 1181 1262 Sulfur ppm ASTM D5185m 2600 3225 2809 3077 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 3 Sodium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/.mm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method	Manganese	ppm	ASTM D5185m	0	<1	<1	0
Phosphorus ppm ASTM D5185m 995 1013 1004 1006 Zinc ppm ASTM D5185m 1180 1326 1181 1262 Sulfur ppm ASTM D5185m 2600 3225 2809 3077 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 3 Sodium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Ab	Magnesium	ppm	ASTM D5185m	950	965	968	994
Zinc ppm ASTM D5185m 1180 1326 1181 1262 Sulfur ppm ASTM D5185m 2600 3225 2809 3077 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 3 Sodium ppm ASTM D5185m >0 5 4 Potassium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414	Calcium	ppm	ASTM D5185m	1050	1162	1040	1096
Sulfur ppm ASTM D5185m 2600 3225 2809 3077 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 3 Sodium ppm ASTM D5185m >20 36 44 2 Potassium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	Phosphorus	ppm	ASTM D5185m	995	1013	1004	1006
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 8 3 Sodium ppm ASTM D5185m 0 5 4 Potassium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	Zinc	ppm	ASTM D5185m	1180	1326	1181	1262
Silicon ppm ASTM D5185m >25 8 8 3 Sodium ppm ASTM D5185m 0 5 4 Potassium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	Sulfur	ppm	ASTM D5185m	2600	3225	2809	3077
Sodium ppm ASTM D5185m 0 5 4 Potassium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 36 44 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	Silicon	ppm	ASTM D5185m	>25	8	8	3
INFRA-RED	Sodium	ppm	ASTM D5185m		0	5	4
Soot % % *ASTM D7844 >4 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	Potassium	ppm	ASTM D5185m	>20	36	44	2
Nitration Abs/cm *ASTM D7624 >20 8.3 7.7 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	Soot %	%	*ASTM D7844	>4	0.5	0.4	0.3
Sulfation Abs/.1mm *ASTM D7415 >30 20.2 19.1 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	Nitration	Abs/cm	*ASTM D7624	>20	8.3	7.7	6.8
Oxidation Abs/.1mm *ASTM D7414 >25 16.1 14.9 14.0	Sulfation		*ASTM D7415	>30			
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.1	14.9	14.0
	Base Number (BN)	mg KOH/g	ASTM D2896		6.6	7.5	7.9



OIL ANALYSIS REPORT



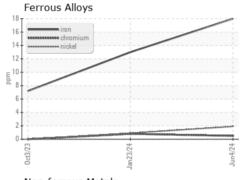


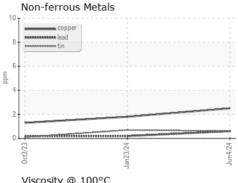


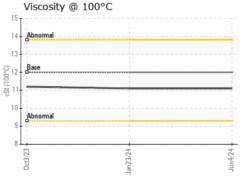
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

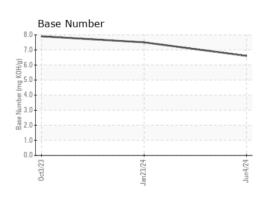
FLUID PROPI	ERHES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.1	11.1	11.2

GRAPHS













Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06201366 Unique Number : 11063489

: PCA0122189

Received : 06 Jun 2024 **Tested** : 07 Jun 2024

Diagnosed : 07 Jun 2024 - Wes Davis **BLUE MAX TRUCKING**

1015 E. WESTINGHOUSE BLVD. CHARLOTTE, NC

US 28273

Contact: Jody Greer jgreer@bluemaxtrucking.com

T: (980)225-9968 F: (704)588-2901

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)