

OIL ANALYSIS REPORT

Sample Rating Trend NORMAL





KOMATSU PC200LC-6 STUMP SHEAR PC200 (S/N A81094) Component **Diesel Engine** Fluid

PETRO CANADA DURON HP 15W40 (22 QTS)

Sample Date Client Into 22 Dec 2023 25 Jan 2021 19 Sep 2020 Machine Age hrs Client Into 13827 13270 13282 Oil Age hrs Client Into 557 200 325 Oil Changed Client Into Changed Changed Changed Changed Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Water WC Method >0 12 10 13 Chromium ppm ASTM 05185m >20 2 2 2 Nickel ppm ASTM 05185m >30 0 <1 <1 Silver ppm ASTM 05185m >40 4 3 2 Copper ppm			Jul2018	Api2013 1602020	0002020 0002021	Dec2023	
Sample Date Client Into 22 Dec 2023 25 Jan 2021 19 Sep 2020 Machine Age hrs Client Into 13827 13270 13282 Oil Age hrs Client Into 557 200 325 Oil Changed Client Into Changed Changed Changed Changed Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Water WC Method >0 12 10 13 Chromium ppm ASTM 05185m >20 2 2 2 Nickel ppm ASTM 05185m >30 0 <1 <1 Silver ppm ASTM 05185m >40 4 3 2 Copper ppm	SAMPLE INFC	RMATION	method	limit/base	current	history1	history2
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Oil Age Ins Client Info 557 200 325 Oil Changed Client Info Changed Changed Changed Changed Changed Changed Sample Status NORMAL NORMAS NORMAL NORMAL	Sample Date		Client Info		22 Dec 2023	25 Jan 2021	19 Sep 2020
Oil Changed Sample Status Client Info Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL COUTTAMIINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Machine Age	hrs	Client Info		13827	13270	13262
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Boron ppm ASTM D5185m 10 10 9 Barium ppm ASTM D5185m 0 0 <1	Cadmium	ppm	ASTM D5185m		0	0	0
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Molybdenum ppm ASTM D5185m 60 62 60 Manganese ppm ASTM D5185m 1 <1	Boron	ppm			-		9
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Sulfur ppm ASTM D5185m 2830 2508 2602 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m<>25 1 5 3 Sodium ppm ASTM D5185m<>20 1 0 <1	Phosphorus	ppm	ASTM D5185m		953	988	998
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m<>25 1 5 3 Sodium ppm ASTM D5185m 22 2 2 Potassium ppm ASTM D5185m 20 <1	Zinc	ppm	ASTM D5185m		1187	1207	1225
Silicon ppm ASTM D5185m >25 1 5 3 Sodium ppm ASTM D5185m >20 2 2 2 Potassium ppm ASTM D5185m >20 <1 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 10.4 8.4 10.2 Sulfation Abs/.1mm *ASTM D7615 >30 20.6 20 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.2 17.1 19.5	Sulfur	ppm	ASTM D5185m		2830	2508	2602
Sodium ppm ASTM D5185m 2 2 2 Potassium ppm ASTM D5185m<>20 <1	CONTAMINA	NTS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 0 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 10.4 8.4 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 20 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.2 17.1 19.5	Silicon	ppm	ASTM D5185m	>25	1	5	3
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 10.4 8.4 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 20 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.2 17.1 19.5	Sodium	ppm	ASTM D5185m		2	2	2
Soot % % *ASTM D7844 >3 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 10.4 8.4 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 20 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.2 17.1 19.5	Potassium	ppm	ASTM D5185m	>20	<1	0	<1
Nitration Abs/cm *ASTM D7624 >20 10.4 8.4 10.2 Sulfation Abs/.1mm *ASTM D7615 >30 20.6 20 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.2 17.1 19.5	INFRA-RED		method	limit/base	current	history1	history2
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Sulfation Abs/.1mm *ASTM D7415 >30 20.6 20 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.2 17.1 19.5	Nitration	Abs/cm	*ASTM D7624	>20	10.4	8.4	10.2
Oxidation Abs/.1mm *ASTM D7414 >25 19.2 17.1 19.5	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	20	
	FLUID DEGR	ADATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	19.2	17.1	19.5
	Base Number (BN) mg KOH/g	ASTM D2896	9.8	9.00	9.66	8.67

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.

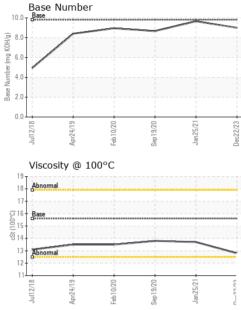
Fluid Condition

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



OIL ANALYSIS REPORT

VISUAL



rtificate		Laborato Sample I Lab Num Unique Nur Test Pack	No. Iber nber age	: PCA010 : 0608498 : 1087243 : MOB 2	9620 8 3		Recei Teste Diagn	ved :0 d :1 osed :1	: 12 Feb 2024					J F PRICI 611 PLEASANT S E WEYMOUTH, M/ US 0218 Contact: JOHN LANC gnalj1970@comcast.ne			
				12 10 10 12 10 10 10 10 10 10 10	Apr24/19	Feb10/20 +	Sep19/20	Jan25/21+	Dec22/23	UN 2.0-	Jul12/18	Apr24/19	Feb10/20 +	Sep19/20 +	Jan 25/21+	2 2 2 2 2	
				18 - Abnom (0-001) 53 14 - Abnom	al					Base Number (mg KOH/g) 6.0	/						
				²⁰ T	sity @ 1	00°C				10.0		Numbe					
							Sep 1	Jani	Deci					Sep1	Jan		
				Jul12/18	Apr24/19	Feb10/20	Sep19/20	Jan 25/21	Dec22/23	0-	Jul12/18	Apr24/19 +	Feb10/20	Sep19/20	Jan 25/21 +		
				100						20.	Abnorma						
				300						60 - Ed 40 -							
				400 Severe	er (ppm af	.) 				80-	SIIICON	ı (ppm)			1		
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				20 - Abnom	al					³⁰ - 20 - 10 -	Abnorma	1					
				40 - Severe						40. = ^{30.}	Severe						
				50 T	inum (p	pm)				50	T 7	nium (p	pm)				
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				50	6				3	20 - 0 -		6					
	Se	ñ	ć	150 - 100 - Abnom	al					E 60 ·	Abnorma	1					
	Sep19/20	Jan25/21 -	6666	200 - Severe						80-	Severe						
				Iron 250 T	(ppm)					100-	Lead ((ppm)					
				GRA	PHS												
				Visc @			cSt	ASTM D445		1450	12.8	irent	13.7		13.8	n y L	
				Free W	ID PR		scalar	*Visual method	limit/b	200	NEG	rrent	NEG	tory1	NEG histo	2112	
					fied Wat		scalar	*Visual	>0.2		NEG		NEG		NEG		
	Sep1	Jan	Dec2	Odor			scalar	*Visual	NORM	L	NOR	ML	NOF	RML	NORM	ЛL	
	Sep19/20 -	Jan25/21 -	Dec22/23	Appea			scalar	*Visual	NORM	L	NOR		NOF		NORM		
		Sand/E)irt		scalar	*Visual	NONE		NON		NON		NONE				
			Silt Debris			scalar scalar	*Visual *Visual	NONE		NON NON		NON		NONE NONE			
			Precipi	tate		scalar	*Visual	NONE		NON		NON		NONE			
				Yellow			scalar	*Visual	NONE				NON		NONE		

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