

OIL ANALYSIS REPORT



Area KEMP QUARRIES / PRYOR STONE [19289424062] Machine Id VVLO49 Component

Diesel Engine

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)



NORMAL

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA89424062	PCA55383035	PCA8216605
Sample Date		Client Info		07 Oct 2019	15 May 2018	17 Mar 2016
Machine Age	hrs	Client Info		36853	35693	34098
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	SEVERE	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method			<1.0	<1.0
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)		13	54	18
Chromium	ppm	ASTM D5185(m)		0	1	0
Nickel	ppm	ASTM D5185(m)		0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)		1	1	1
Lead	ppm	ASTM D5185(m)		0	3	0
Copper	ppm	ASTM D5185(m)		6	67	3
Tin	ppm	ASTM D5185(m)		0	2	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		32	14	37
Barium	ppm	ASTM D5185(m)		0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m)		0 31	0 47	0 51
				-		
Molybdenum	ppm	ASTM D5185(m)		31	47	51
Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m)		31 0	47	51
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		31 0 462	47 645	51 944
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		31 0 462 1285	47 645 1205	51 944 1367
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	31 0 462 1285 719	47 645 1205 733	51 944 1367 1077 1191
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	31 0 462 1285 719 691	47 645 1205 733 924	51 944 1367 1077 1191
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Method	limit/base	31 0 462 1285 719 691 current	47 645 1205 733 924 history1	51 944 1367 1077 1191 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	31 0 462 1285 719 691 current 4	47 645 1205 733 924 history1 6	51 944 1367 1077 1191 history2 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm VTS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	31 0 462 1285 719 691 current 4 4	47 645 1205 733 924 history1 6 47	51 944 1367 1077 1191 history2 2 2 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm VTS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	31 0 462 1285 719 691 <u>current</u> 4 4 0	47 645 1205 733 924 history1 6 47 10	51 944 1367 1077 1191 history2 2 2 2 1 0.0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINAN Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm VTS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		31 0 462 1285 719 691 <u>current</u> 4 4 0 0.0	47 645 1205 733 924 history1 6 47 10 0.0	51 944 1367 1077 1191 history2 2 2 2 1 0.0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ypm ppm ppm	ASTM D5185(m) ASTM D5185(m)		31 0 462 1285 719 691 current 4 4 0 0 0.0 Current	47 645 1205 733 924 history1 6 47 10 0.0 history1	51 944 1367 1077 1191 history2 2 2 2 2 1 0.0 history2 1.85
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185(m) ASTM D5185(m)	limit/base	31 0 462 1285 719 691 <u>current</u> 4 4 0 0.0 0.0 <u>current</u> 2.28	47 645 1205 733 924 history1 6 47 10 0.0 history1 ♦ 5.61	51 944 1367 1077 1191 history2 2 2 2 2 1 0.0 history2 1.85
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % FLUID DEGRA	ppm ppm ppm ppm ppm ppm ypm ppm ppm % DATION Abs/.1mm	ASTM D5185(m) ASTM D7922* Method ASTM D7844*	limit/base	31 0 462 1285 719 691 current 4 4 0 0.0 0.0 current 2.28 current	47 645 1205 733 924 history1 6 47 10 0.0 history1 ↓ istory1 ↓	51 944 1367 1077 1191 history2 2 2 2 2 1 0.0 history2 1.85 history2 4
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % FLUID DEGRA Oxidation	ppm ppm ppm ppm ppm ppm ypm ppm ppm % DATION Abs/.1mm	ASTM D5185(m) ASTM D71842 ASTM D7844* ASTM D7414*	limit/base limit/base	31 0 462 1285 719 691 current 4 4 4 0 0 0.0 current 2.28 current 	47 645 1205 733 924 history1 6 47 10 0.0 history1 ↓ 5.61 history1 0	51 944 1367 1077 1191 history2 2 2 2 2 1 0.0 history2 1.85 history2

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Fluid

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.



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