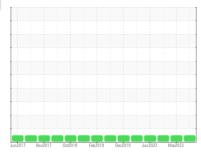


OIL ANALYSIS REPORT

CONSTRUCTORS, INC **KOMATSU DIESEL 12-1251**

Component **Diesel Engine**

MOBIL DELVAC 1300 SUPER 10W30 (--- GAL)



Sample Rating Trend



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

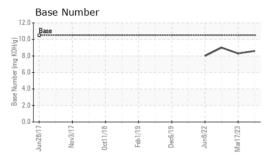
Fluid Condition

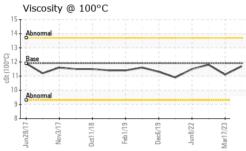
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Date Client Info 07 Jul 2023 17 Mar 2023 09 Sep 2022 Machine Age hrs Client Info 22992 22405 21998 Oil Age hrs Client Info 587 707 565 Oil Changed Client Info Changed Changed NoRMAL NO	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 07 Jul 2023 17 Mar 2023 09 Sep 2022 Machine Age hrs Client Info 22992 22405 21998 Oil Age hrs Client Info 587 707 565 Oil Changed Client Info Changed Changed NoRMAL NO	Sample Number		Client Info		SBP0004523	SBP0003793	SBP0001361
Machine Age hrs Client Info 22992 22405 21698 Oil Age hrs Client Info 587 707 565 Oil Changed Changed Not Changed	Sample Date		Client Info		07 Jul 2023	17 Mar 2023	09 Sep 2022
Changed Changed NORMAL NORMAL NORMAL NORMAL	Machine Age	hrs	Client Info		22992	22405	21698
Changed Changed NORMAL NORMAL NORMAL NORMAL	Oil Age	hrs	Client Info		587	707	565
NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		Changed	Changed	Not Changd
Fuel	Sample Status				_	NORMAL	NORMAL
WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185m >100 10 12 10 Chromium ppm ASTM D5185m >20 <1	CONTAMINATIO	V	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	<1.0
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	10	12	10
Silver	Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Silver	Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Aluminum	Titanium		ASTM D5185m		<1	0	0
Lead ppm ASTM D5185m >40 13 10 13 Copper ppm ASTM D5185m >330 3 4 4 Tin ppm ASTM D5185m >15 <1	Silver	ppm	ASTM D5185m	>3	0	0	<1
Copper ppm ASTM D5185m >330 3 4 4 Tin ppm ASTM D5185m >15 <1 <1 <1 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 25 10 10 Barium ppm ASTM D5185m 1 0 0 Molybdenum ppm ASTM D5185m 54 58 54 Manganese ppm ASTM D5185m 54 58 54 Manganesium ppm ASTM D5185m 329 894 866 Calcium ppm ASTM D5185m 972 1017 929 Zinc ppm ASTM D5185m 972 1017 929 Zinc ppm ASTM D5185m 3505 3160	Aluminum	ppm	ASTM D5185m	>20	<1	1	2
Tin	Lead	ppm	ASTM D5185m	>40	13	10	13
Vanadium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>330	3	4	4
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 25 10 10 Barium ppm ASTM D5185m 1 0 0 Molybdenum ppm ASTM D5185m 54 58 54 Manganese ppm ASTM D5185m <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 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	Tin	ppm	ASTM D5185m	>15	<1	<1	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 1 0 0 Molybdenum ppm ASTM D5185m 54 58 54 Manganese ppm ASTM D5185m <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 54 58 54 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		25	10	10
Manganese ppm ASTM D5185m <1	Barium	ppm	ASTM D5185m		1	0	0
Magnesium ppm ASTM D5185m 829 894 866 Calcium ppm ASTM D5185m 1538 1217 1086 Phosphorus ppm ASTM D5185m 972 1017 929 Zinc ppm ASTM D5185m 1232 1239 1200 Sulfur ppm ASTM D5185m 3505 3160 2786 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 3 3 Sodium ppm ASTM D5185m 5 4 3 3 Potassium ppm ASTM D5185m >20 3 4 <1	Molybdenum	ppm	ASTM D5185m		54	58	54
Calcium ppm ASTM D5185m 1538 1217 1086 Phosphorus ppm ASTM D5185m 972 1017 929 Zinc ppm ASTM D5185m 1232 1239 1200 Sulfur ppm ASTM D5185m 3505 3160 2786 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 3 3 Sodium ppm ASTM D5185m >20 3 4 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.1 9.5 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 21.1 22.6 FLUID DEGRADATION method limit/base current history1 histor	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus ppm ASTM D5185m 972 1017 929 Zinc ppm ASTM D5185m 1232 1239 1200 Sulfur ppm ASTM D5185m 3505 3160 2786 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 3 3 Sodium ppm ASTM D5185m 5 4 3 Potassium ppm ASTM D5185m >20 3 4 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.1 9.5 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 21.1 22.6 FLUID DEGRADATION method limit/base current history1	Magnesium	ppm	ASTM D5185m		829	894	866
Zinc ppm ASTM D5185m 1232 1239 1200 Sulfur ppm ASTM D5185m 3505 3160 2786 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 3 3 Sodium ppm ASTM D5185m 5 4 3 Potassium ppm ASTM D5185m >20 3 4 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.1 9.5 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 21.1 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20	Calcium	ppm	ASTM D5185m		1538	1217	1086
Sulfur ppm ASTM D5185m 3505 3160 2786 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 3 3 Sodium ppm ASTM D5185m 5 4 3 Potassium ppm ASTM D5185m >20 3 4 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.1 9.5 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 21.1 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.1 18.0 18.8	Phosphorus	ppm	ASTM D5185m		972	1017	929
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 3 3 Sodium ppm ASTM D5185m 5 4 3 Potassium ppm ASTM D5185m >20 3 4 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.5 0.4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.1 9.5 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 21.1 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.1 18.0 18.8	Zinc	ppm	ASTM D5185m		1232	1239	1200
Silicon ppm ASTM D5185m >25 4 3 3 Sodium ppm ASTM D5185m 5 4 3 Potassium ppm ASTM D5185m >20 3 4 <1	Sulfur	ppm	ASTM D5185m		3505	3160	2786
Sodium ppm ASTM D5185m 5 4 3 Potassium ppm ASTM D5185m >20 3 4 <1	CONTAMINANTS	;	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 3 4 <1	Silicon	ppm	ASTM D5185m	>25	4	3	3
INFRA-RED	Sodium	ppm	ASTM D5185m		5	4	3
Soot % % *ASTM D7844 >3 0.5 0.4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.1 9.5 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 21.1 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.1 18.0 18.8	Potassium	ppm	ASTM D5185m	>20	3	4	<1
Nitration Abs/cm *ASTM D7624 >20 9.1 9.5 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 21.1 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.1 18.0 18.8	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 22.6 21.1 22.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.1 18.0 18.8	Soot %	%	*ASTM D7844	>3	0.5	0.4	0.5
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.1 18.0 18.8	Nitration	Abs/cm	*ASTM D7624	>20	9.1	9.5	9.5
Oxidation Abs/.1mm *ASTM D7414 >25 20.1 18.0 18.8	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	21.1	22.6
	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	18.0	18.8
	Base Number (BN)	mg KOH/g	ASTM D2896	10.5		8.3	9.0



OIL ANALYSIS REPORT

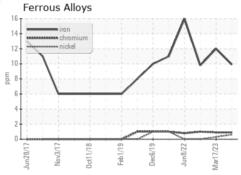


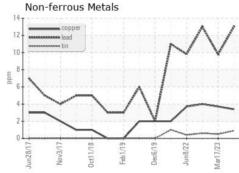


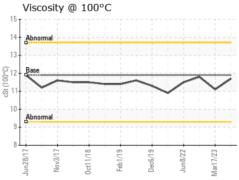
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

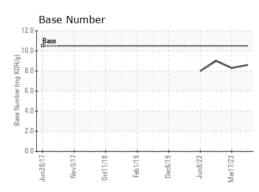
FLUID PROPER	TIES	method				history2
Visc @ 100°C	cSt	ASTM D445	11.9	11.7	11.1	11.8

GRAPHS











Laboratory Sample No. Lab Number **Unique Number**

: SBP0004523 : 05900661 : 10562017

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 17 Jul 2023 Diagnosed : 18 Jul 2023

Diagnostician : Wes Davis

Test Package : FLEET Certificate L2367 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)

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