

# **OIL ANALYSIS REPORT**

## Sample Rating Trend



Machine Id

200-126

Component **Diesel Engine** 

TULCO LUBSOIL CK-4 15W40 (13 GAL)

## 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

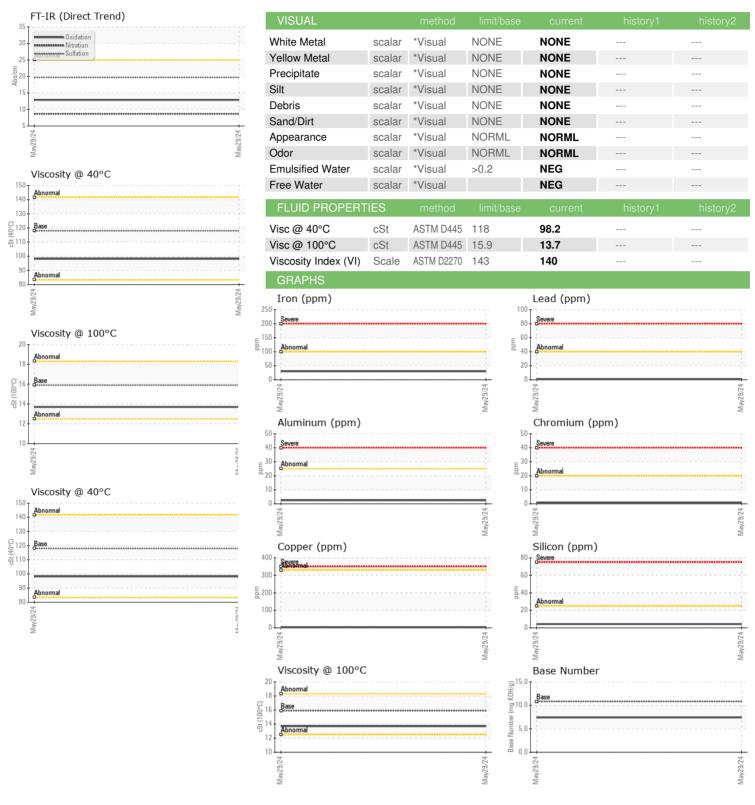
## **Fluid Condition**

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

Chromium							· •
Sample Number   Client Info   TO50002390					May2024		
Sample Number   Client Info   TO50002390	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Client Info   Agam			Client Info			•	
Machine Age							
Dil Age	•	hre			-		
Client Info   Changed   Client Info   NORMAL   CONTAMINATION   Method   Imit/base   current   history1   history2   Contamination   Contamin	-						
CONTAMINATION		1110			•		
CONTAMINATION   method   limit/base   current   history1   history2	-		Oliciti IIIIO				
Water   WC Method   S5   C1.0   C1.0   C2.0   WE   Water   WC Method   VC.2   NEG   C2.0   NEG	·	VI.	method	limit/base			history2
Water Glycol         WC Method         0.2.2         NEG		N .					
WEAR METALS					7•		
WEAR METALS         method         limit/base         current         history1         history2           ron         ppm         ASTM D5185m         >100         30             Chromium         ppm         ASTM D5185m         >20         <1				>0.2			
Chromium	JIYCOI		WC Method		NEG		
Description	WEAR METALS		method	limit/base	current	history1	history2
Strickel	-	ppm					
Silver		ppm					
Saliver	Nickel	ppm		>2			
Aluminum		ppm	ASTM D5185m	>2	<1		
Part	Silver	ppm	ASTM D5185m	>2			
Copper	Aluminum	ppm	ASTM D5185m	>25	2		
ASTM D5185m   STM D5185m   ST	_ead	ppm	ASTM D5185m	>40	<1		
Vanadium         ppm         ASTM D5185m         <1             Cadmium         ppm         ASTM D5185m         <1             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         65         7             Magnesium         ppm         ASTM D5185m         1060         81             Magnesium         ppm         ASTM D5185m         1140         2120             Phosphorus         ppm         ASTM D5185m         1170         754             Phosphorus         ppm         ASTM D5185m         1230         1018             Phosphorus         ppm         ASTM D5185m         1230         1018             Sulfur         ppm         ASTM D5185m         225         4 </td <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;330</td> <td>4</td> <td></td> <td></td>	Copper	ppm	ASTM D5185m	>330	4		
ADDITIVES	Γin	ppm	ASTM D5185m	>15	<1		
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1		
Boron	Cadmium	ppm	ASTM D5185m		<1		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         65         7             Manganese         ppm         ASTM D5185m         1060         81             Magnesium         ppm         ASTM D5185m         1060         81             Calcium         ppm         ASTM D5185m         1140         2120             Phosphorus         ppm         ASTM D5185m         1170         754             Zinc         ppm         ASTM D5185m         1230         1018             Sulfur         ppm         ASTM D5185m         3130         3672             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             Soot %         "ASTM D5185m         >20 <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>0</td> <td></td> <td></td>	Boron	ppm	ASTM D5185m		0		
Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         1060         81             Calcium         ppm         ASTM D5185m         1140         2120             Phosphorus         ppm         ASTM D5185m         1170         754             Zinc         ppm         ASTM D5185m         1230         1018             Sulfur         ppm         ASTM D5185m         3130         3672             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             Soot %         %         *ASTM D7844         >3	Barium	ppm	ASTM D5185m		0		
Magnesium         ppm         ASTM D5185m         1060         81             Calcium         ppm         ASTM D5185m         1140         2120             Phosphorus         ppm         ASTM D5185m         1170         754             Zinc         ppm         ASTM D5185m         1230         1018             Sulfur         ppm         ASTM D5185m         3130         3672             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         8.7             Sulfation         Abs/.1mm         *ASTM D7415 <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>65</td> <td>7</td> <td></td> <td></td>	Molybdenum	ppm	ASTM D5185m	65	7		
Calcium         ppm         ASTM D5185m         1140         2120             Phosphorus         ppm         ASTM D5185m         1170         754             Zinc         ppm         ASTM D5185m         1230         1018             Sulfur         ppm         ASTM D5185m         3130         3672             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         8.7             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.7             FLUID DEGRADATION         method         lim	Manganese	ppm	ASTM D5185m		<1		
Phosphorus         ppm         ASTM D5185m         1170         754             Zinc         ppm         ASTM D5185m         1230         1018             Sulfur         ppm         ASTM D5185m         3130         3672             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7             Sulfation         Abs/cm         *ASTM D7415         >30         19.7             FLUID DEGRADATION         method         limit/base         current         history1         history2           Dxidation         Abs/.1mm         *ASTM D74	Magnesium	ppm	ASTM D5185m	1060	81		
Zinc   ppm   ASTM D5185m   1230   1018       Sulfur   ppm   ASTM D5185m   3130   3672	Calcium	ppm	ASTM D5185m	1140	2120		
Sulfur         ppm         ASTM D5185m         3130         3672             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7             Silitration         Abs/cm         *ASTM D7624         >20         8.7             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.9	Phosphorus	ppm	ASTM D5185m	1170	754		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         <1	Zinc	ppm	ASTM D5185m	1230	1018		
Solition   ppm   ASTM D5185m   >25   4	Sulfur	ppm	ASTM D5185m	3130	3672		
Sodium	CONTAMINANTS	;	method	limit/base	current	history1	history2
Sodium	Silicon	ppm	ASTM D5185m	>25	4		
Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7             Nitration         Abs/cm         *ASTM D7624         >20         8.7             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.7             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.9	Sodium		ASTM D5185m		<1		
Soot %         %         *ASTM D7844 >3         0.7             Nitration         Abs/cm         *ASTM D7624 >20         8.7             Sulfation         Abs/.1mm         *ASTM D7415 >30         19.7             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         12.9	Potassium		ASTM D5185m	>20	3		
Nitration         Abs/cm         *ASTM D7624         >20         8.7             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.7             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.9	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.7             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.9	Soot %	%	*ASTM D7844	>3	0.7		
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.7             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.9	Vitration	Abs/cm	*ASTM D7624	>20	8.7		
Oxidation			*ASTM D7415	>30			
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	12.9		
	Base Number (BN)			10.8	7.41		



# **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No.

Lab Number : 06206744

: TO50002390 Unique Number : 11074205

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received

**Tested** Diagnosed

: 13 Jun 2024 - Sean Felton

: 11 Jun 2024

: 13 Jun 2024

Test Package : MOB 2 ( Additional Tests: KV40, VI ) 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)

**KLX ENERGY SERVICES 701 N MAIN** 

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