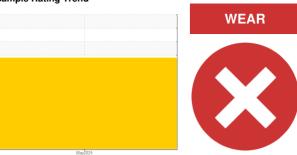


# **PROBLEM SUMMARY**

Sample Rating Trend

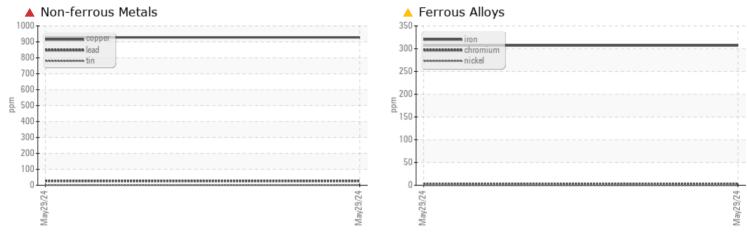


Machine Id **200-126** 

Component Transmission

TRC SYNTEX 2000 GEAR OIL 50W (5 GAL)

## COMPONENT CONDITION SUMMARY



### RECOMMENDATION

The fluid change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS							
Sample Status				SEVERE			
Iron	ppm	ASTM D5185m	>200	<b>A</b> 307			
Copper	maa	ASTM D5185m	>200	<b>928</b>			

Customer Id: KLXUNI Sample No.: TO50002358 Lab Number: 06206893 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS						
Action	Status	Date	Done By	Description		
Inspect Wear Source			?	We advise that you inspect for the source(s) of wear.		
Resample			?	We recommend an early resample to monitor this condition.		

# HISTORICAL DIAGNOSIS



# **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id

200-126

Component Transmission

TRC SYNTEX 2000 GEAR OIL 50W (5 GAL)

## DIAGNOSIS

#### ▲ Recommendation

The fluid change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### Wear

Bearing and/or gear wear is indicated.

### Contamination

There is no indication of any contamination in the

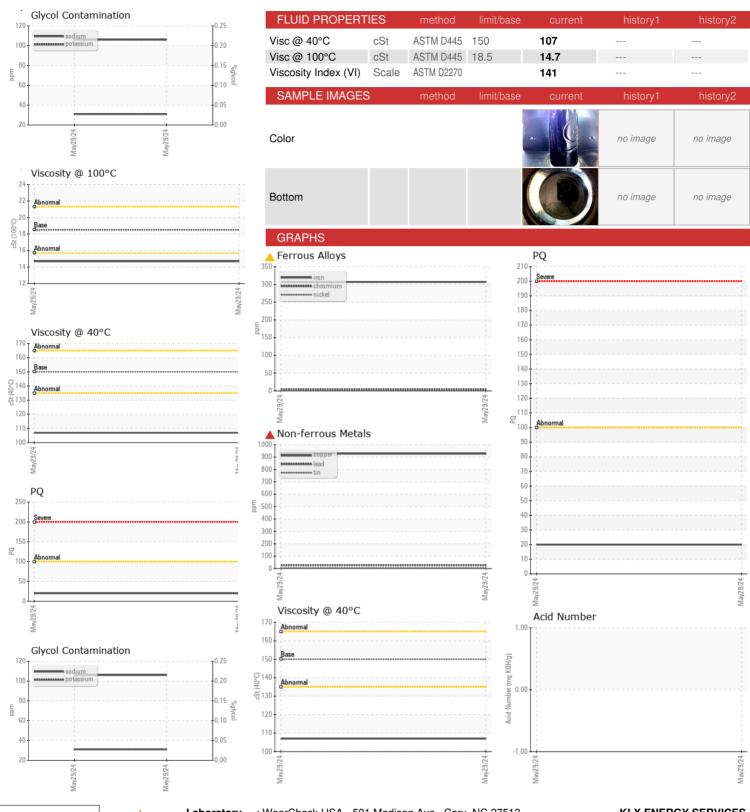
#### **Fluid Condition**

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

SAMPLE INFORMATION   method   limit/base   current   history1   history2					May2024		
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date   Client Info   4326	Sample Number		Client Info		TO50002358		
Machine Age         hrs         Client Info         4326              Oil Age         hrs         Client Info         Changed              Sample Status         Cilent Info         Changed              CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.1         NEG             WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D5185m         200         A 307             Chromium         ppm         ASTM D5185m         >10         3             Chromium         ppm         ASTM D5185m         >1         1             Nickel         ppm         ASTM D5185m         >10         3             Aluminum         ppm         ASTM D5185m         >50         6             Lead         ppm         ASTM D5185m         >50         27			Client Info		29 May 2024		
Oil Age         hrs         Client Info         Changed	•	hrs					
Oil Changed Sample Status         Client Info         Changed Severe             CONTAMINATION         method         Imitibase         current         history1         history2           Water         WC Method         >0.1         NEG             WEAR METALS         method         Imitibase         current         history1         history2           PQ         ASTM D5185m         200         307             Chromium         ppm         ASTM D5185m         200         307             Chromium         ppm         ASTM D5185m         21              Nickel         ppm         ASTM D5185m         -1         3             Silver         ppm         ASTM D5185m         -50         6             Silver         ppm         ASTM D5185m         -50         27             Lead         ppm         ASTM D5185m         >50         27             Copper         ppm         ASTM D5185m         >0         22 <th>•</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>0</th> <th></th> <th></th>	•	hrs	Client Info		0		
Sample Status	-		Client Info		Changed		
Water         WC Method         >0.1         NEG            WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184         20             Iron         ppm         ASTM D5185m         >200         A 307            Chromium         ppm         ASTM D5185m         <1					_		
WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184         20             Iron         ppm         ASTM D8185m         >200         ▲ 3077            Chromium         ppm         ASTM D8185m         >10         3            Nickel         ppm         ASTM D8185m         <1             Silver         ppm         ASTM D8185m         0             Silver         ppm         ASTM D8185m         0             Aluminum         ppm         ASTM D8185m         >50         6             Lead         ppm         ASTM D8188m         >50         27             Copper         ppm         ASTM D8188m         >0             Tin         ppm         ASTM D8188m         0             Vanadium         ppm         ASTM D8188m         0             Abtholister         ppm         ASTM D8188m         0 <th>CONTAMINATION</th> <th>٧</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	CONTAMINATION	٧	method	limit/base	current	history1	history2
PQ         ASTM D8184 Iron         20             Iron         ppm         ASTM D5185m         >200         ▲ 3077             Chromitum         ppm         ASTM D5185m         >10         3             Nickel         ppm         ASTM D5185m         <1             Silver         ppm         ASTM D5185m         <0             Aluminum         ppm         ASTM D5185m         >50         6             Lead         ppm         ASTM D5185m         >50         6             Lead         ppm         ASTM D5185m         >20         27             Copper         ppm         ASTM D5185m         0             Tin         ppm         ASTM D5185m         0             Copper         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         5	Water		WC Method	>0.1	NEG		
Iron	WEAR METALS		method	limit/base	current	history1	history2
Chromium	PQ		ASTM D8184		20		
Nickel   ppm   ASTM D5185m   <1	Iron	ppm	ASTM D5185m	>200	<b>^</b> 307		
Titanium	Chromium	ppm	ASTM D5185m	>10	3		
Silver	Nickel	ppm	ASTM D5185m		<1		
Aluminum         ppm         ASTM D5185m         >50         6             Lead         ppm         ASTM D5185m         >50         27             Copper         ppm         ASTM D5185m         >200         ■ 928             Tin         ppm         ASTM D5185m         >10         2             Vanadium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         0              Boron         ppm         ASTM D5185m         243              Barium         ppm         ASTM D5185m         5              Molybdenum         ppm         ASTM D5185m         19              Magnesium         ppm         ASTM D5185m         6              Calcium         ppm         ASTM D5185m         57              Phosphorus         ppm         ASTM D5185m         96	Titanium	ppm	ASTM D5185m		<1		
Lead         ppm         ASTM D5185m         >50         27             Copper         ppm         ASTM D5185m         >200         ▲ 928             Tin         ppm         ASTM D5185m         >10         2             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             Boron         ppm         ASTM D5185m         243             Barium         ppm         ASTM D5185m         5             Molybdenum         ppm         ASTM D5185m         5             Magnesium         ppm         ASTM D5185m         6             Magnesium         ppm         ASTM D5185m         57             Phosphorus         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         66             Sulfur         ppm         ASTM D5185m         680	Silver	ppm	ASTM D5185m		0		
Copper         ppm         ASTM D5185m         >200         ▲ 928             Tin         ppm         ASTM D5185m         >10         2             Vanadium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         243             Barium         ppm         ASTM D5185m         5             Molybdenum         ppm         ASTM D5185m         5             Manganese         ppm         ASTM D5185m         19             Magnesium         ppm         ASTM D5185m         6             Calcium         ppm         ASTM D5185m         57             Phosphorus         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         680             Zinc         ppm         ASTM D5185m         >50	Aluminum	ppm	ASTM D5185m	>50	6		
Tin         ppm         ASTM D5185m         >10         2             Vanadium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         243             Barium         ppm         ASTM D5185m         5             Molybdenum         ppm         ASTM D5185m         3             Manganese         ppm         ASTM D5185m         6             Magnesium         ppm         ASTM D5185m         57             Calcium         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         660             Zinc         ppm         ASTM D5185m         680             Zinc         ppm         ASTM D5185m         680             Sulfur         ppm         ASTM D5185m         50         16 </th <th>Lead</th> <th>ppm</th> <th>ASTM D5185m</th> <th>&gt;50</th> <th>27</th> <th></th> <th></th>	Lead	ppm	ASTM D5185m	>50	27		
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         243             Barium         ppm         ASTM D5185m         5             Molybdenum         ppm         ASTM D5185m         3             Magnesium         ppm         ASTM D5185m         6             Magnesium         ppm         ASTM D5185m         6             Calcium         ppm         ASTM D5185m         966             Phosphorus         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         680             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         16	Copper	ppm	ASTM D5185m	>200	<b>928</b>		
Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         243             Barium         ppm         ASTM D5185m         5             Molybdenum         ppm         ASTM D5185m         3             Manganese         ppm         ASTM D5185m         6             Magnesium         ppm         ASTM D5185m         6             Calcium         ppm         ASTM D5185m         966             Phosphorus         ppm         ASTM D5185m         66             Phosphorus         ppm         ASTM D5185m         680             Zinc         ppm         ASTM D5185m         50         16             Sulfur         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         106	Tin	ppm	ASTM D5185m	>10	2		
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         243             Barium         ppm         ASTM D5185m         5             Molybdenum         ppm         ASTM D5185m         3             Manganese         ppm         ASTM D5185m         6             Magnesium         ppm         ASTM D5185m         6             Magnesium         ppm         ASTM D5185m         57             Phosphorus         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         66             Sulfur         ppm         ASTM D5185m         680             Sulfur         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         >20         31             Sodium         ppm         ASTM D5185m         >20	Vanadium	ppm	ASTM D5185m		0		
Boron	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         3             Manganese         ppm         ASTM D5185m         19             Magnesium         ppm         ASTM D5185m         6             Calcium         ppm         ASTM D5185m         57             Phosphorus         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         66             Sulfur         ppm         ASTM D5185m         680             Sulfur         ppm         ASTM D5185m         50         16             Sodium         ppm         ASTM D5185m         106             Potassium         ppm         ASTM D5185m         20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE	Boron	ppm	ASTM D5185m		243		
Manganese         ppm         ASTM D5185m         19             Magnesium         ppm         ASTM D5185m         6             Calcium         ppm         ASTM D5185m         966             Phosphorus         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         666             Sulfur         ppm         ASTM D5185m         680             Sulfur         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         >20         31             Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar	Barium	ppm	ASTM D5185m		5		
Magnesium         ppm         ASTM D5185m         6             Calcium         ppm         ASTM D5185m         57             Phosphorus         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         666             Sulfur         ppm         ASTM D5185m         680             Sulfur         ppm         ASTM D5185m         550         16             Sodium         ppm         ASTM D5185m         106             Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE            Yellow Metal         scalar         *Visual         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE            Silt         scalar         *Visual <td< th=""><th>Molybdenum</th><th>ppm</th><th>ASTM D5185m</th><th></th><th>3</th><th></th><th></th></td<>	Molybdenum	ppm	ASTM D5185m		3		
Calcium         ppm         ASTM D5185m         57             Phosphorus         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         66             Sulfur         ppm         ASTM D5185m         680             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         >20         31             Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE </th <th>Manganese</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>19</th> <th></th> <th></th>	Manganese	ppm	ASTM D5185m		19		
Phosphorus         ppm         ASTM D5185m         966             Zinc         ppm         ASTM D5185m         66             Sulfur         ppm         ASTM D5185m         680             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         >20         31             Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE            Silt         scalar         *Visual         NONE         NONE            Debris	Magnesium	ppm	ASTM D5185m		6		
Zinc         ppm         ASTM D5185m         66             Sulfur         ppm         ASTM D5185m         680             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         >20         31             Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE	Calcium	ppm	ASTM D5185m		57		
Sulfur         ppm         ASTM D5185m         680             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         >20         31             Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE            Silt         scalar         *Visual         NONE         NONE            Debris         scalar         *Visual         NONE         NONE            Sand/Dirt         scalar         *Visual         NORML         NORML            Appearance         <	Phosphorus	ppm	ASTM D5185m		966		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         106             Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         <	Zinc	ppm	ASTM D5185m		66		
Silicon         ppm         ASTM D5185m         >50         16             Sodium         ppm         ASTM D5185m         106             Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Godor         scalar         *Visual <t< th=""><th>Sulfur</th><th>ppm</th><th>ASTM D5185m</th><th></th><th>680</th><th></th><th></th></t<>	Sulfur	ppm	ASTM D5185m		680		
Sodium         ppm         ASTM D5185m         106             Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Free Water         scalar         *Visual	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         31             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Free Water         scalar         *Visual         NO.1         NEG         Submitted By: FRANKIE GOAD	Silicon	ppm	ASTM D5185m	>50	16		
VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG         Submitted By: FRANKIE GOAD	Sodium	ppm	ASTM D5185m		106		
White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG         Submitted By: FRANKIE GOAD	Potassium	ppm	ASTM D5185m	>20	31		
Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG         Submitted By: FRANKIE GOAD	VISUAL		method	limit/base	current	history1	history2
Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG         Submitted By: FRANKIE GOAD	White Metal	scalar	*Visual	NONE	NONE		
Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG         Submitted By: FRANKIE GOAD	Yellow Metal	scalar	*Visual	NONE	NONE		
Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.1 NEG Submitted By: FRANKIE GOAD		scalar					
Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG             Free Water         scalar         *Visual         NEG         Submitted By: FRANKIE GOAD		scalar			NONE		
Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.1 NEG Free Water scalar *Visual NEG Submitted By: FRANKIE GOAD	Debris	scalar	*Visual				
Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.1 NEG Free Water scalar *Visual NEG Submitted By: FRANKIE GOAD	Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water scalar *Visual >0.1 NEG Submitted By: FRANKIE GOAD NEG Submitted By: FRANKIE GOAD		scalar					
Free Water scalar *Visual NEG Submitted By: FRANKIE GOAD	Odor	scalar	*Visual	NORML	NORML		
1100 Trator	Emulsified Water	scalar	*Visual	>0.1	NFG		
						0 1 111 15 -	DANIE COAS



## **OIL ANALYSIS REPORT**





Certificate 12367

Laboratory Sample No.

: TO50002358 Lab Number : 06206893

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 11 Jun 2024 **Tested** : 18 Jun 2024 Diagnosed

: 18 Jun 2024 - Jonathan Hester  $\textbf{Unique Number} \quad : 11074354$ Test Package : IND 2 ( Additional Tests: Glycol, KV100, PQ, 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. **KLX ENERGY SERVICES 701 N MAIN** 

UNION CITY, OK US 73090-9657 Contact: FRANKIE GOAD frankie.goad@klx.com

T: F: