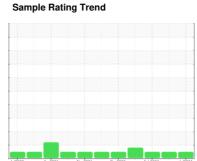


# **OIL ANALYSIS REPORT**

## Guin







# KANSAS/44/SKIDSTEER 53.150L [KANSAS^44^SKIDSTEER]

**Diesel Engine** 

MOBIL DELVAC 1300 SUPER 15W40 (--- GAL)

# DIAGNOSIS

### 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

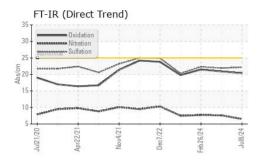
# **Fluid Condition**

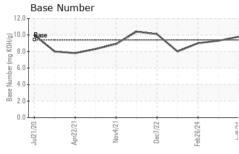
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

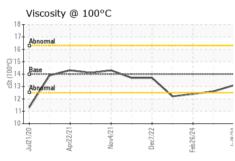
Sample Number	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date   Client Info   08 Jul 2024   29 May 2024   26 Feb 2024   Machine Age   hrs   Client Info   0   260   0   0   0   0   0   0   0   0   0						· ·	
Machine Age         hrs         Client Info         2958         2815         2555           Oil Age         hrs         Client Info         0         260         0           Oil Changed         Client Info         Changed         Changed         Changed         Changed           Sample Status         Moranda         NoRMAL         NoRMAL         NoRMAL         NoRMAL           CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0         <1.0         <1.0         <1.0           Water         WC Method         NEG         NEG         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history2         NEG         NEG           Iron         ppm         ASTM D5185m         >100         4         8         9           Chromium         ppm         ASTM D5185m         >20         0         <1         <1           Iron         ppm         ASTM D5185m         >2         0         0         <1         <1           Iron         ppm         ASTM D5185m         >2 <t< th=""><th>•</th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	•						
Oil Age         hrs         Client Info         Changed         NORMAL	•	hre					
Client Info   Changed   NORMAL   NORMAL   NORMAL   NORMAL   NORMAL							
NORMAL   NORMAL   NORMAL   NORMAL	-	1110			•		ū
CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0			Oliciti IIIIo			Ü	_
Fuel	·		m otherd	limit/booo			
Water Glycol         WC Method WC Method         >0.2         NEG NEG         NEG NEG         NEG NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         4         8         9           Chromium         ppm         ASTM D5185m         >20         0         <1         <1           Nickel         ppm         ASTM D5185m         >2         0         0         <1           Sliver         ppm         ASTM D5185m         >2         0         0         <1           Sliver         ppm         ASTM D5185m         >2         0         0         <1           Sliver         ppm         ASTM D5185m         >2         0         0         0           Sliver         ppm         ASTM D5185m         >40         0         0         0           Copper         ppm         ASTM D5185m         >40         0         0         0         -1           Tin         ppm         ASTM D5185m         >15         0         0         -1         1           Vanadium         ppm         ASTM D5185m         0		V					
WEAR METALS							
NEAR METALS				>0.2	-		
Iron			WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >20         0         <1         <1           Nickel         ppm         ASTM D5185m         >2         0         0         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	_	ppm	ASTM D5185m	>100			9
Description   Description	Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Silver	Nickel	ppm					
Aluminum         ppm         ASTM D5185m         >25         1         2         3           Lead         ppm         ASTM D5185m         >40         0         0         0           Copper         ppm         ASTM D5185m         >330         0         1         1           Tin         ppm         ASTM D5185m         >15         0         0         <1	Titanium	ppm	ASTM D5185m	>2	0	0	<1
Lead	Silver	ppm	ASTM D5185m	>2	0		
Copper         ppm         ASTM D5185m         >330         0         1         1           Tin         ppm         ASTM D5185m         >15         0         0         <1	Aluminum	ppm	ASTM D5185m	>25	1	2	3
Tin	Lead	ppm	ASTM D5185m	>40	0	0	0
Vanadium         ppm         ASTM D5185m         0         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         47         54         50           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         37         38         43           Manganese         ppm         ASTM D5185m         <1         0         <1         0         <1           Magnesium         ppm         ASTM D5185m         0         510         485         508           Calcium         ppm         ASTM D5185m         1858         1620         1638           Phosphorus         ppm         ASTM D5185m         789         760         837           Zinc         ppm         ASTM D5185m         943         907         961           Sulfur         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS	Copper	ppm	ASTM D5185m	>330	0	1	1
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         47         54         50           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         37         38         43           Manganese         ppm         ASTM D5185m         0         37         38         43           Magnesium         ppm         ASTM D5185m         0         510         485         508           Calcium         ppm         ASTM D5185m         0         510         485         508           Calcium         ppm         ASTM D5185m         1858         1620         1638           Phosphorus         ppm         ASTM D5185m         789         760         837           Zinc         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS         method         limit/base         current         history1         history2           <	Tin	ppm	ASTM D5185m	>15	0	0	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	<1
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         37         38         43           Manganese         ppm         ASTM D5185m         -1         0         -1           Magnesium         ppm         ASTM D5185m         0         510         485         508           Calcium         ppm         ASTM D5185m         1858         1620         1638           Phosphorus         ppm         ASTM D5185m         789         760         837           Zinc         ppm         ASTM D5185m         943         907         961           Sulfur         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         2         -1         2           Potassium         ppm         ASTM D5185m         20         -1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         "ASTM D78	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0         37         38         43           Manganese         ppm         ASTM D5185m         <1         0         <1           Magnesium         ppm         ASTM D5185m         0         510         485         508           Calcium         ppm         ASTM D5185m         1858         1620         1638           Phosphorus         ppm         ASTM D5185m         789         760         837           Zinc         ppm         ASTM D5185m         943         907         961           Sulfur         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6         9           Sodium         ppm         ASTM D5185m         20         <1         2         2           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot % <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>47</th> <td>54</td> <td>50</td>	Boron	ppm	ASTM D5185m	0	47	54	50
Manganese         ppm         ASTM D5185m         <1         0         <1           Magnesium         ppm         ASTM D5185m         0         510         485         508           Calcium         ppm         ASTM D5185m         1858         1620         1638           Phosphorus         ppm         ASTM D5185m         789         760         837           Zinc         ppm         ASTM D5185m         943         907         961           Sulfur         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6         9           Sodium         ppm         ASTM D5185m         >20         <1         2         2           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         6.5         7.6         7.7           Sulfation<	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium         ppm         ASTM D5185m         0         510         485         508           Calcium         ppm         ASTM D5185m         1858         1620         1638           Phosphorus         ppm         ASTM D5185m         789         760         837           Zinc         ppm         ASTM D5185m         943         907         961           Sulfur         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6         9           Sodium         ppm         ASTM D5185m         2         <1         2           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1         0.1         0.1           Nitration         Abs/cm         *ASTM D7415         >30         22.2         21.9         22.3           F	Molybdenum	ppm	ASTM D5185m	0	37	38	43
Calcium         ppm         ASTM D5185m         1858         1620         1638           Phosphorus         ppm         ASTM D5185m         789         760         837           Zinc         ppm         ASTM D5185m         943         907         961           Sulfur         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6         9           Sodium         ppm         ASTM D5185m         2         <1	Manganese	ppm	ASTM D5185m		<1	0	<1
Phosphorus         ppm         ASTM D5185m         789         760         837           Zinc         ppm         ASTM D5185m         943         907         961           Sulfur         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6         9           Sodium         ppm         ASTM D5185m         2         <1	Magnesium	ppm	ASTM D5185m	0	510	485	508
Zinc         ppm         ASTM D5185m         943         907         961           Sulfur         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6         9           Sodium         ppm         ASTM D5185m         2         <1         2           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1         0.1         0.1           Nitration         Abs/cm         *ASTM D7624         >20         6.5         7.6         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         21.9         22.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.4         20.9 </td <td>Calcium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>1858</th> <td>1620</td> <td>1638</td>	Calcium	ppm	ASTM D5185m		1858	1620	1638
Sulfur         ppm         ASTM D5185m         3003         2792         2574           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6         9           Sodium         ppm         ASTM D5185m         2         <1	Phosphorus	ppm	ASTM D5185m		789	760	837
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6         9           Sodium         ppm         ASTM D5185m         2         <1	Zinc	ppm	ASTM D5185m		943	907	961
Silicon         ppm         ASTM D5185m         >25         6         6         9           Sodium         ppm         ASTM D5185m         2         <1         2           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1         0.1         0.1           Nitration         Abs/cm         *ASTM D7624         >20         6.5         7.6         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         21.9         22.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.4         20.9         21.5	Sulfur	ppm	ASTM D5185m		3003	2792	2574
Sodium         ppm         ASTM D5185m         2         <1         2           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1         0.1         0.1           Nitration         Abs/cm         *ASTM D7624         >20         6.5         7.6         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         21.9         22.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.4         20.9         21.5	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1         0.1         0.1           Nitration         Abs/cm         *ASTM D7624         >20         6.5         7.6         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         21.9         22.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.4         20.9         21.5	Silicon	ppm	ASTM D5185m	>25	6	6	9
INFRA-RED						4	0
Soot %         %         *ASTM D7844 >3         0.1         0.1         0.1           Nitration         Abs/cm         *ASTM D7624 >20         6.5         7.6         7.7           Sulfation         Abs/.1mm         *ASTM D7415 >30         22.2         21.9         22.3           FLUID DEGRADATION method limit/base current history1 history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         20.4         20.9         21.5	Sodium	ppm	ASTM D5185m		2	<	2
Nitration         Abs/cm         *ASTM D7624         >20         6.5         7.6         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         21.9         22.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.4         20.9         21.5				>20			
Nitration         Abs/cm         *ASTM D7624         >20         6.5         7.6         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         21.9         22.3           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.4         20.9         21.5	Potassium		ASTM D5185m		<1	2	2
Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2         21.9         22.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.4         20.9         21.5	Potassium INFRA-RED	ppm	ASTM D5185m method	limit/base	<1 current	2 history1	2 history2
Oxidation Abs/.1mm *ASTM D7414 >25 <b>20.4</b> 20.9 21.5	Potassium INFRA-RED Soot %	ppm %	ASTM D5185m method *ASTM D7844	limit/base	<1 current 0.1	2 history1 0.1	2 history2 0.1
Oxidation Abs/.1mm *ASTM D7414 >25 <b>20.4</b> 20.9 21.5	Potassium INFRA-RED Soot % Nitration	ppm % Abs/cm	Method *ASTM D7844 *ASTM D7624	limit/base >3 >20	<1 current 0.1 6.5	2 history1 0.1 7.6	2 history2 0.1 7.7
	Potassium  INFRA-RED  Soot %  Nitration  Sulfation	ppm % Abs/cm Abs/.1mm	ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >3 >20 >30	<1 current 0.1 6.5 22.2	2 history1 0.1 7.6 21.9	2 history2 0.1 7.7 22.3
	Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm % Abs/cm Abs/.1mm	ASTM D5185m  method  *ASTM D7844  *ASTM D7624  *ASTM D7415  method	limit/base >3 >20 >30 limit/base	<1 current 0.1 6.5 22.2 current	2 history1 0.1 7.6 21.9 history1	2 history2 0.1 7.7 22.3 history2

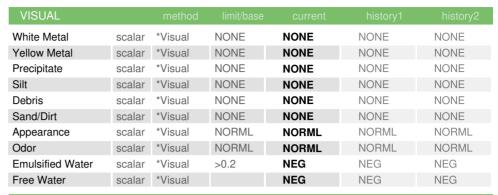


# **OIL ANALYSIS REPORT**



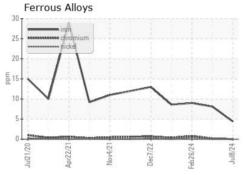


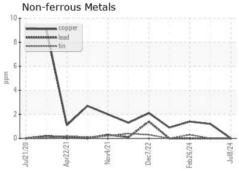


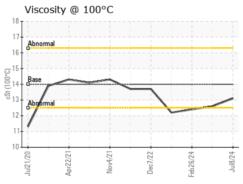


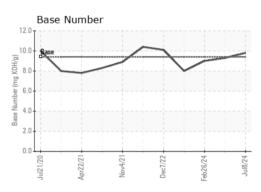
FLUID PROPER	ITIES	method				history2
Visc @ 100°C	cSt	ASTM D445	14	13.1	12.6	12.4

### **GRAPHS**













Certificate 12367

Laboratory Sample No.

: WC0918348 Lab Number : 06235730 Unique Number : 11124564

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

Received **Tested** Diagnosed

: 15 Jul 2024 : 16 Jul 2024

: 16 Jul 2024 - Wes Davis

SHERWOOD CONSTRUCTION CO INC 3219 WEST MAY ST WICHITA, KS

US 67213 Contact: DOUG KING doug.king@sherwood.net T: (316)617-3161

Test Package : CONST ( Additional Tests: TBN ) 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)

F: x: