**WEAR** CONTAMINATION **FLUID CONDITION** 

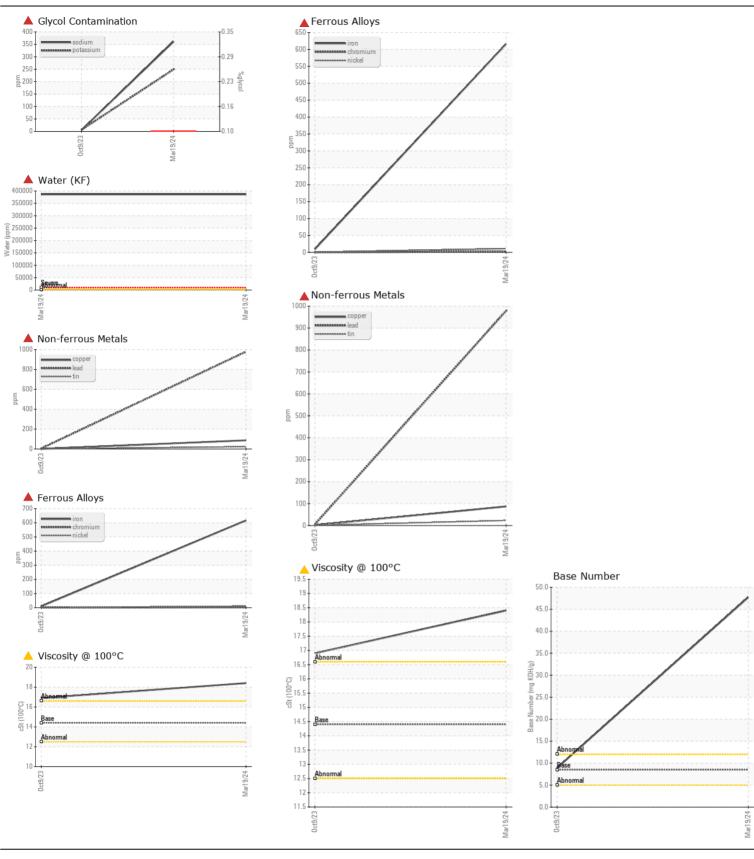
**SEVERE SEVERE ABNORMAL** 

Machine Id

Component Diesel Engine

Satisped outside   Satisped ou	DIESEL ENGINE OIL SAE 15W40 ( GAL)							
Weadvise that you check for the source of the coolant leak. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you impelt for the sourcel(s) of wear. We recommend an early resample to monitor this condition.	RECOMMENDATION	Test	UOM	Method	I imit/Abn	Current	History1	History2
We advise that you check for the source of the coolant leak. We recommend and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of war. We recommend an early resample to monitor this condition.    WEAR	TEOSIMILER DATION						,	,
Machine Age   December   Machine Age   December   Machine Age   December	We advise that you check for the source of the coolant leak. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the	•						
Source(s) of wear. We recommend an early resample to monitor this condition.   Changed Histor Changed Chieffer Changed Sample Status			hrs	Client Info				
Filter Age   hrs   Client Info   NA   Changed   Client Info   NA   Changed   Changed		Oil Age	hrs			0	100	
Oil Changed   Client Info   N/A   Changed   Client Info   Client Info   N/A   Changed   Client Info   N/A   Changed   Client Info   N/A   Changed   Client Info   N/A   Changed   Clien				Client Info			100	
Filter Changed   Sample Status   Several Changed   Se	condition.	Oil Changed		Client Info		N/A	Changed	
Normal   N		Filter Changed		Client Info		N/A	_	
Chromium   ppm   ASTM DSISSES   20   2   1		-				SEVERE	NORMAL	
Chromium   ppm   ASTM DSISSES   20   2   1	WEAR	Iron	ppm	ASTM D5185m	>100	<b>▲</b> 616	10	
Wear is indicated. Moderate concentration of visible metal present.   Titanium   ppm   ASTM D5156m   3   0   0   0   0   0   0   0   0   0		Chromium	ppm	ASTM D5185m	>20	2	<1	
Silver   ppm   ASTM D5185m   >3   0   <1	Cylinder, crank, or cam shaft wear is indicated. Bearing and/or bushing wear is indicated. Moderate concentration of visible metal present.	Nickel	ppm	ASTM D5185m	>4	<b>1</b> 1	<1	
Aluminum   ppm   ASTM D5185m   >20		Titanium	ppm	ASTM D5185m		0	0	
Aluminum   ppm   ASTM D5186m   > -20   11   3   3		Silver	ppm	ASTM D5185m	>3	0	<1	
Lead		Aluminum		ASTM D5185m	>20	11	3	
Tin		Lead	ppm	ASTM D5185m	>40	<b>4</b> 978	5	
Vanadium		Copper	ppm	ASTM D5185m	>330	87	2	
White Metal Yellow Metal   Scalar   *Visual   NONE   NON		Tin	ppm	ASTM D5185m	>15	<b>2</b> 3	<1	
Sodium and/or potassium levels are high. There is a severe concentration of water and glycol present in the oil.   Silicon		Vanadium	ppm	ASTM D5185m		0	0	
Silicon   ppm   ASTM D5185m   >25   22   6		White Metal	scalar	*Visual	NONE	▲ MODER	NONE	
Potassium   ppm   ASTM D588s   20   249   6		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Fuel   WC Method   Solution   S	CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	22	6	
Concentration of water and glycol present in the oil.    Water   %   ASTM D6304   >0.2   38.6           ppm Water   ppm   ASTM D6304   >2000   386000           Glycol   %   "ASTM D6304   >2000   386000           Silt   Scalar   "ASTM D7844   >2   0.10   NEG         Nitration   Abs/:mm "ASTM D7844   >2   25.7   6.4         Sulfation   Abs/:mm "ASTM D7844   >2   25.7   6.4         Sulfation   Abs/:mm "ASTM D7844   >2   25.7   6.4         Sulfation   Abs/:mm "ASTM D7845   >30   11.2   15.2         Silt   scalar "Visual   NONE   NONE   NONE   NONE       NONE	0.11	Potassium	ppm	ASTM D5185m	>20	<u> </u>	6	
Water   ppm   Water   ppm   ppm   ASTM D50804   ≥0.00     38.60     −−−   −−−   −−−     −−−   −−−   −−−     −−−−   −−−   −−−−   −−−   −−−−   −−−−   −−−−   −−−−   −−−−   −−−−   −−−−   −−−−−−	Sodium and/or potassium levels are high. There is a severe concentration of water and glycol present in the oil.	Fuel		WC Method	>5	<1.0	<1.0	
Glycol		Water	%	ASTM D6304	>0.2	<b>38.6</b>		
Soot %		ppm Water	ppm	ASTM D6304	>2000	▲ 386000		
Nitration		Glycol	%	*ASTM D2982		<b>△</b> 0.10	NEG	
Sulfation   Abs/1mm   *ASTM D7415   >30   11.2   15.2       Silt   scalar   *Visual   NONE   NONE   NONE   NONE     Debris   scalar   *Visual   NONE   NONE   NONE   NONE   NONE     Appearance   scalar   *Visual   NORML   NO		Soot %	%	*ASTM D7844	>3	0.9	0.1	
Silt   Scalar   *Visual   NONE   NORML   NORM		Nitration	Abs/cm	*ASTM D7624	>20	25.7	6.4	
Debris   Scalar   *Visual   NONE   NORML			Abs/.1mm	*ASTM D7415	>30		15.2	
Sand/Dirt   Scalar   *Visual   NONE   NONE   NORML		Silt	scalar	*Visual	NONE	NONE	NONE	
Appearance   Scalar   *Visual   NORML   NORML		Debris	scalar		NONE	NONE	NONE	
Odor   scalar   *Visual   NORML   NORML   NORML   Fmulsified Water   scalar   *Visual   >0.2   ▲ 0.2%   NEG		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Emulsified Water scalar *Visual >0.2 ▲ 0.2% NEG  FLUID CONDITION  The oil viscosity is higher than normal. The oil is no longer serviceable.  Sodium ppm ASTM D5185m 250 87 22  Barium ppm ASTM D5185m 10 <1 0  Molybdenum ppm ASTM D5185m 100 191 84  Magnesium ppm ASTM D5185m 8 <1  Magnesium ppm ASTM D5185m 3000 2080 2108  Calcium ppm ASTM D5185m 1150 1241 902  Zinc ppm ASTM D5185m 1350 1819 974  Sulfur ppm ASTM D5185m 4250 5146 3504  Oxidation Abs/.1mm *ASTM D7414 >25 33.0 8.8  Base Number (BN) mg KOHg ASTM D2896 8.5 47.7 8.9		Appearance	scalar			_		
Sodium   ppm   ASTM D5185m   >158   Magnesium   ppm   ASTM D5185m   D518		Odor	scalar	*Visual	NORML	NORML	NORML	
Boron   ppm   ASTM D5185m   250   87   22		Emulsified Water	scalar	*Visual	>0.2	<b>0.2%</b>	NEG	
The oil viscosity is higher than normal. The oil is no longer serviceable.    Barium   ppm   ASTM D5185m   100   191   84	FLUID CONDITION		ppm					
Molybdenum   ppm   ASTM D5185m   100   191   84	The oil viscosity is higher than normal. The oil is no longer serviceable.							
Manganese         ppm         ASTM D5185m         8         <1								
Magnesium         ppm         ASTM D5185m         450         287         137            Calcium         ppm         ASTM D5185m         3000         2080         2108            Phosphorus         ppm         ASTM D5185m         1150         1241         902            Zinc         ppm         ASTM D5185m         1350         1819         974            Sulfur         ppm         ASTM D5185m         4250         5146         3504            Oxidation         Abs/.1mm         *ASTM D7414         >25         33.0         8.8            Base Number (BN)         mg KOH/g         ASTM D2896         8.5         47.7         8.9		•			100			
Calcium         ppm         ASTM D5185m         3000         2080         2108            Phosphorus         ppm         ASTM D5185m         1150         1241         902            Zinc         ppm         ASTM D5185m         1350         1819         974            Sulfur         ppm         ASTM D5185m         4250         5146         3504            Oxidation         Abs/.1mm         *ASTM D7414         >25         33.0         8.8            Base Number (BN)         mg KOH/g         ASTM D2896         8.5         47.7         8.9					4=-			
Phosphorus         ppm         ASTM D5185m         1150         1241         902            Zinc         ppm         ASTM D5185m         1350         1819         974            Sulfur         ppm         ASTM D5185m         4250         5146         3504            Oxidation         Abs/.1mm         *ASTM D7414         >25         33.0         8.8            Base Number (BN)         mg KOH/g         ASTM D2896         8.5         47.7         8.9								
Zinc         ppm         ASTM D5185m         1350         1819         974            Sulfur         ppm         ASTM D5185m         4250         5146         3504            Oxidation         Abs/.1mm         *ASTM D7414         >25         33.0         8.8            Base Number (BN)         mg KOH/g         ASTM D2896         8.5         47.7         8.9								
Sulfur         ppm         ASTM D5185m         4250         5146         3504            Oxidation         Abs/.1mm         *ASTM D7414         >25         33.0         8.8            Base Number (BN)         mg KOH/g         ASTM D2896         8.5         47.7         8.9								
Oxidation         Abs/.1mm         *ASTM D7414         >25         33.0         8.8            Base Number (BN)         mg KOH/g         ASTM D2896         8.5         47.7         8.9								
Base Number (BN)         mg KOH/g         ASTM D2896         8.5         47.7         8.9								
Visc @ 100°C cSt ASTM D445 14.4 4 18.4 16.9								
		Visc @ 100°C	cSt	ASTM D445	14.4	18.4	16.9	

Contact/Location: SCOTT WOODY - TARRAL





Laboratory Sample No.

Lab Number : 06123398

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0921948

Unique Number: 10937549

Received **Tested** Diagnosed

: 20 Mar 2024

: 22 Mar 2024

: 22 Mar 2024 - Don Baldridge

Test Package : CONST ( Additional Tests: Glycol, KF, 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.

MAY HEAVY EQUIPMENT / National Equipment Dealers

555 WISE RD CLAYTON, NC US 27528 Contact: SCOTT WOODY

swoody@nedealers.com

T: F: (919)773-1425 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)