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

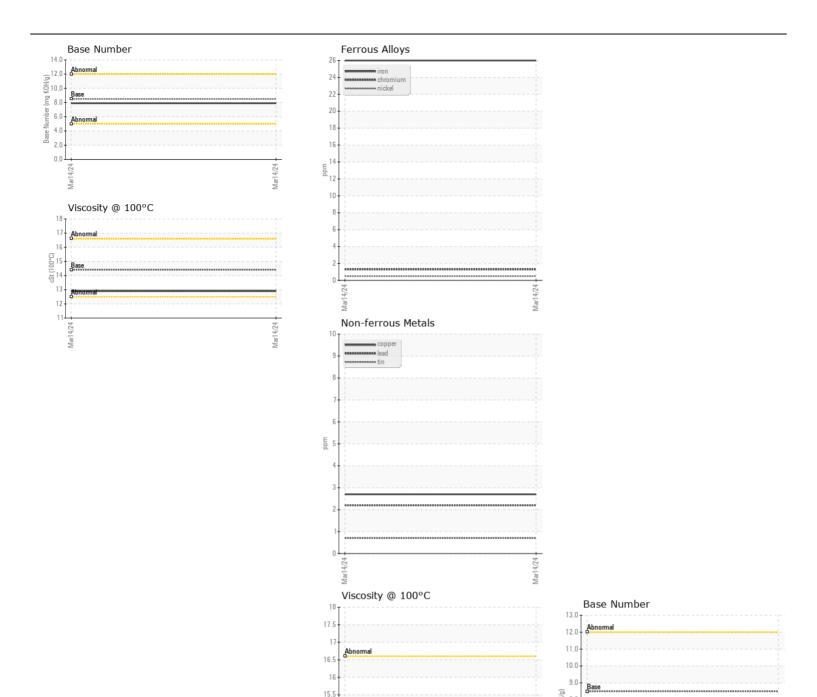
**NORMAL NORMAL NORMAL** 

## JR0208348 (S/N NOT GIVEN)

Diesel Engine

PRECOMMENDATION	DIESEL ENGINE OIL SAE 15W40 ( GAL)							
Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the brand, type, and type specific type. Please specify the brand, type, and type specific type. Please specify the please specify the brand, type specific type. Please specifi		Test	LIOM	Method	Limit/Ahn	Current	History1	History2
Resemple at the next service interval to monitor. Please specify the brand. type, and viscosity of the oil on your next sample.   Sample Date   Machine Age   hrs   Client Info   0   0	Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the		OOW		LITTION		,	
Machine Age   Installation   Machine Age								
Oil Age			hrs					
Filter Age		•						
Cil Changed   Cilent Info   N/A								
Filter Changed   Sample Status   Sample Stat		•				-		
Normal   N								
All component wear rates are normal.    Chromium   ppm   ASTM DSISS   -4   -1         Titanium   ppm   ASTM DSISS   -4   -1       Titanium   ppm   ASTM DSISS   -4   -1       Titanium   ppm   ASTM DSISS   -4   -1       Aluminum   ppm   ASTM DSISS   -3   0       Aluminum   ppm   ASTM DSISS   -2   7       Lead   ppm   ASTM DSISS   -3   0       Lead   ppm   ASTM DSISS   -3   0   3       Titanium   ppm   ASTM DSISS   -3   0   2       ASTM DSISS   -3   0   3       Titanium   ppm   ASTM DSISS   -3   0   4       Titanium   ppm   ASTM DSISS   -3   0   0       Titunium   ppm   ASTM DS		•						
All component wear rates are normal.    Chromium   ppm   ASTM DSISS   -4   -1         Titanium   ppm   ASTM DSISS   -4   -1       Titanium   ppm   ASTM DSISS   -4   -1       Titanium   ppm   ASTM DSISS   -4   -1       Aluminum   ppm   ASTM DSISS   -3   0       Aluminum   ppm   ASTM DSISS   -2   7       Lead   ppm   ASTM DSISS   -3   0       Lead   ppm   ASTM DSISS   -3   0   3       Titanium   ppm   ASTM DSISS   -3   0   2       ASTM DSISS   -3   0   3       Titanium   ppm   ASTM DSISS   -3   0   4       Titanium   ppm   ASTM DSISS   -3   0   0       Titunium   ppm   ASTM DS	WEAR	Iron	ppm	ASTM D5185m	>100	26		
Nickel   ppm   ASTM D6186m   y-4   <1		Chromium		ASTM D5185m	>20			
Titanium	All component wear rates are normal.							
Silver   ppm   ASTM D5185m   >3   0								
Aluminum   ppm   ASTM D5185m   >20   7					>3			
Lead   ppm   ASTM D5185m   340   2								
Copper   ppm   ASTM D5185m   >330   3								
Tin								
Vanadium   White Metal   Scalar   Visual   NONE								
Vellow Metal   Scalar   Visual   NONE   NONE		Vanadium		ASTM D5185m		<1		
CONTAMINATION		White Metal			NONE	NONE		
Potassium   ppm   ASTM D5185m   >20   4		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium   ppm   ASTM D5185m   >20   4	CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	17		
Fuel WC Method >5		Potassium	• • • • • • • • • • • • • • • • • • • •	ASTM D5185m	>20	4		
Glycol   Soot % % 'ASTM D7844   3   0.4	There is no indication of any contamination in the oil.	Fuel				<1.0		
Soot %		Water		WC Method	>0.2	NEG		
Soot %		Glycol		WC Method		NEG		
Sulfation   Abs.lmm   'ASTM D7415   >30   23.4			%	*ASTM D7844	>3	0.4		
Silt   Scalar   *Visual   NONE   NO		Nitration	Abs/cm	*ASTM D7624	>20	9.0		
Debris   Scalar   *Visual   NONE   NONE   Sand/Dirt   Scalar   *Visual   NORML   NORML   NoRML   Sc		Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4		
Sand/Dirt   Scalar   *Visual   NONE   NORML   NORML		Silt	scalar	*Visual	NONE	NONE		
Appearance   Scalar   *Visual   NORML   NORML   NORML   Emulsified Water   Scalar   *Visual   NORML   NORML   NORML   Emulsified Water   Scalar   *Visual   NORML   NORML   NORML   NORML   Emulsified Water   Scalar   *Visual   NORML   NO		Debris	scalar	*Visual	NONE	NONE		
Codor   Scalar   *Visual   NORML   N		Sand/Dirt	scalar	*Visual	NONE	NONE		
Codor   Scalar   Visual   NORML   NO		Appearance	scalar	*Visual	NORML	NORML		
Sodium   ppm   ASTM D5185m   >158   2			scalar	*Visual	NORML	NORML		
Boron   ppm   ASTM D5185m   250   222         Barium   ppm   ASTM D5185m   100   249         Molybdenum   ppm   ASTM D5185m   100   249         Manganese   ppm   ASTM D5185m   450   829         Calcium   ppm   ASTM D5185m   3000   1633         Phosphorus   ppm   ASTM D5185m   1150   1124         Zinc   ppm   ASTM D5185m   4250   3739         Sulfur   ppm   ASTM D5185m   4250   3739         Oxidation   Abs/.1mm *ASTM D7414   >25   17.9       Base Number (BN)   mg KOH/g   ASTM D2896   8.5   7.9		Emulsified Water	scalar	*Visual	>0.2	NEG		
Boron   ppm   ASTM D5185m   250   222         Barium   ppm   ASTM D5185m   100   249         Molybdenum   ppm   ASTM D5185m   100   249         Magnesium   ppm   ASTM D5185m   450   829         Calcium   ppm   ASTM D5185m   3000   1633         Phosphorus   ppm   ASTM D5185m   1150   1124         Zinc   ppm   ASTM D5185m   4250   3739         Sulfur   ppm   ASTM D5185m   4250   3739         Oxidation   Abs/.1mm *ASTM D7414   >25   17.9         Base Number (BN)   mg KOHg   ASTM D2896   8.5   7.9	FLUID CONDITION	Sodium	ppm	ASTM D5185m	>158	2		
oil. The condition of the oil is suitable for further service.    Molybdenum   ppm   ASTM D5185m   100   249         Manganese   ppm   ASTM D5185m   450   829         Calcium   ppm   ASTM D5185m   3000   1633         Phosphorus   ppm   ASTM D5185m   1150   1124         Zinc   ppm   ASTM D5185m   1350   1264         Sulfur   ppm   ASTM D5185m   4250   3739         Oxidation   Abs/.1mm *ASTM D7414   >25   17.9         Base Number (BN)   mg KOH/g   ASTM D2896   8.5   7.9		Boron	ppm	ASTM D5185m	250	222		
Molybdenum         ppm         ASTM D5185m         100         249             Manganese         ppm         ASTM D5185m         <1	,	Barium	ppm	ASTM D5185m	10	<1		
Magnesium         ppm         ASTM D5185m         450         829             Calcium         ppm         ASTM D5185m         3000         1633             Phosphorus         ppm         ASTM D5185m         1150         1124             Zinc         ppm         ASTM D5185m         1350         1264             Sulfur         ppm         ASTM D5185m         4250         3739             Oxidation         Abs/.1mm         *ASTM D7414         >25         17.9             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		Molybdenum	ppm	ASTM D5185m	100	249		
Calcium         ppm         ASTM D5185m         3000         1633             Phosphorus         ppm         ASTM D5185m         1150         1124             Zinc         ppm         ASTM D5185m         1350         1264             Sulfur         ppm         ASTM D5185m         4250         3739             Oxidation         Abs/.1mm         *ASTM D7414         >25         17.9             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		Manganese	ppm	ASTM D5185m		<1		
Phosphorus         ppm         ASTM D5185m         1150         1124             Zinc         ppm         ASTM D5185m         1350         1264             Sulfur         ppm         ASTM D5185m         4250         3739             Oxidation         Abs/.1mm         *ASTM D7414         >25         17.9             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		Magnesium	ppm	ASTM D5185m	450	829		
Zinc         ppm         ASTM D5185m         1350         1264             Sulfur         ppm         ASTM D5185m         4250         3739             Oxidation         Abs/.1mm         *ASTM D7414         >25         17.9             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		-	ppm			1633		
Zinc         ppm         ASTM D5185m         1350         1264             Sulfur         ppm         ASTM D5185m         4250         3739             Oxidation         Abs/.1mm         *ASTM D7414         >25         17.9             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		Phosphorus	ppm	ASTM D5185m	1150	1124		
Sulfur         ppm         ASTM D5185m         4250         3739             Oxidation         Abs/.1mm         *ASTM D7414         >25         17.9             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		Zinc		ASTM D5185m	1350			
Oxidation         Abs/.1mm         *ASTM D7414         >25         17.9             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		Sulfur	ppm	ASTM D5185m	4250	3739		
		Oxidation	Abs/.1mm			17.9		
Visc @ 100°C cSt ASTM D445 14.4 12.9		Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.9		
		Visc @ 100°C	cSt	ASTM D445	14.4	12.9		

Contact/Location: DANNY HUFF - BSSWAR







Laboratory Sample No.

Lab Number : 06125434 Unique Number : 10939585

: JR0208348

Mari

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13.

12.

11.5

Received **Tested** Diagnosed

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 21 Mar 2024 : 22 Mar 2024

: 22 Mar 2024 - Wes Davis

Mar14/24

(mg

6.0 5.0

Contact: DANNY HUFF

dhuff@bandssite.com T: (540)270-3203 F: (703)753-0605

**B & S SITE DEVLEOPMENT** 

7800 PINEY BRANCH LANE

BRISTOW, VA

US 20136

Page 2 of 2

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)

Contact/Location: DANNY HUFF - BSSWAR