

WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL



Machine Id FREIGHTLINER RL-52

Diesel Engine

GIBRALTAR 15W/40 SUPER S-3 LX (--- GAL)

Test	GIBRALTAR 15W/40 SUPER S-	3 LX ( GA	L)					
Resample at the next service interval to monitor.   Sample Date   Client Info   Mo20245	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Mesample at the next service interval to monitor.		Sample Number		Client Info		WC0875519		
Machino Age   hrs   Client Info   15778	Resample at the next service interval to monitor.					04 Apr 2024		
Oil Age   hrs   Client Info   Changed   Filter Age   hrs   Client Info   Changed   C			hrs					
Filter Age   hrs   Client Info   Changed   Client Info   Changed   Changed   Client Info   Changed   Changed   Client Info   Changed		•						
Oil Changed   Client Info   Changed   Client Info   Changed   Ch								
Filter Changed Sample Status								
Normal   Part   Part								
Iron						_		
Chromium   ppm   ASTM 05185m   2-2   0								
Nicke	WEAR	Iron	ppm	ASTM D5185m	>80	9		
Titanium   ppm   ASTM DSISEm   0		Chromium	ppm	ASTM D5185m	>5	0		
Silver   ppm   ASTM D5185m   -30   0	Metal levels are typical for a new component breaking in.	Nickel	ppm	ASTM D5185m	>2	0		
Aluminum   ppm   ASTM D5185m   >30   1		Titanium	ppm	ASTM D5185m		0		
Lead   ppm   ASTM DS185m   >30   0		Silver	ppm	ASTM D5185m	>3	0		
Copper		Aluminum	ppm	ASTM D5185m	>30	1		
Copper		Lead				0		
Tin		Copper		ASTM D5185m	>150	0		
Vanadium   ppm   ASTM D5185m   NONE   NONE   White Metal   scalar   Visual   NONE   NONE   Water   Visual   NONE   NONE   Water   NONE   Water   WC Method   So   Visual   NONE   Water   Visual   NONE   Water   Visual   NONE   Water   Visual   NONE   Water   Visual   NONE   NONE   Water   Visual   NONE   Water   Visual   NORM   NORM   Water   Visual   NORM				ASTM D5185m	>5	<1		
White Metal   Scalar   Visual   NONE   NON		Vanadium				0		
Vellow Metal   Scalar   Visual   NONE   NO					NONE	NONE		
Potassium   ppm   ASTM D5185m   >20   4		Yellow Metal	scalar		NONE	NONE		
Potassium   ppm   ASTM 05185m   >20   0								
Fuel   WC Method   Sol   Sol	CONTAMINATION	Silicon	ppm	ASTM D5185m	>20	4		
Water   WC Method   Sol   NEG   Sol   WC Method   NEG   Sol   Sol   WC Method   NEG   Sol   So		Potassium	ppm	ASTM D5185m	>20	0		
Glycol   Soot % % 'ASTM D7844   S3   0.5   S		Fuel		WC Method	>5	<1.0		
Soot % %		Water		WC Method	>0.2	NEG		
Nitration   Abs/cm   "ASTM D7624   >20   8.4		Glycol		WC Method		NEG		
Sulfation   Abs/.fmm   *ASTM D7415   >30   19.0		Soot %	%	*ASTM D7844	>3	0.5		
Silt   Scalar   *Visual   NONE   NONE   NONE   Sand/Dirt   Scalar   *Visual   NONE   NONE   NONE   Sand/Dirt   Scalar   *Visual   NONE   NONE   Sand/Dirt   Scalar   *Visual   NONE   NONE   Scalar   *Visual   NORE   Scalar   *Visual   Scalar   *Visual   NORE   Scalar   *Visual   Scalar   *Visual   Scalar   *Visual   Scalar   *Visual   Scalar   *Visual   Scalar   *Visual   Scalar   *Scalar   *Visual   Scalar   *Scalar   *Sca		Nitration	Abs/cm	*ASTM D7624	>20	8.4		
Debris   Scalar   *Visual   NONE   NONE   NONE   Sand/Dirt   Scalar   *Visual   NONE   NORML   N		Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0		
Sand/Dirt   Scalar   *Visual   NONE   NONE   NONE   Appearance   Scalar   *Visual   NORML		Silt	scalar	*Visual	NONE	NONE		
Appearance   Odor   Scalar   *Visual   NORML   NORML   NORML   Emulsified Water   Scalar   *Visual   NORML		Debris	scalar	*Visual	NONE	NONE		
Odor   Scalar   *Visual   NORML   NORML   Fmulsified Water   Scalar   *Visual   visual   vi		Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water   scalar   *Visual   >0.2   NEG         The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.		Appearance	scalar	*Visual	NORML	NORML		
Sodium   ppm   ASTM D5185m   7		Odor	scalar	*Visual	NORML	NORML		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.    Barium   ppm   ASTM D5185m   <1         Molybdenum   ppm   ASTM D5185m   66   69         Magnesium   ppm   ASTM D5185m   1000   871         Calcium   ppm   ASTM D5185m   1050   1191         Phosphorus   ppm   ASTM D5185m   1150   1082         Sulfur   ppm   ASTM D5185m   1270   1261         Sulfur   ppm   ASTM D5185m   3541         Oxidation   Abs/.1mm   *ASTM D7414   >25   15.2         Base Number (BN)   mg KOH/g   ASTM D2896   10.1   8.2		<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG		
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Molybdenum         ppm         ASTM D5185m         66         69             Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         1000         871             Calcium         ppm         ASTM D5185m         1050         1191             Phosphorus         ppm         ASTM D5185m         1150         1082             Zinc         ppm         ASTM D5185m         1270         1261             Sulfur         ppm         ASTM D5185m         3541             Oxidation         Abs/.1mm         *ASTM D7414         >25         15.2            Base Number (BN)         mg KOH/g         ASTM D2896         10.1         8.2								
Magnesium         ppm         ASTM D5185m         1000         871             Calcium         ppm         ASTM D5185m         1050         1191             Phosphorus         ppm         ASTM D5185m         1150         1082             Zinc         ppm         ASTM D5185m         1270         1261             Sulfur         ppm         ASTM D5185m         3541             Oxidation         Abs/.1mm         *ASTM D7414         >25         15.2             Base Number (BN)         mg KOH/g         ASTM D2896         10.1         8.2			ppm		66			
Calcium         ppm         ASTM D5185m         1050         1191             Phosphorus         ppm         ASTM D5185m         1150         1082             Zinc         ppm         ASTM D5185m         1270         1261             Sulfur         ppm         ASTM D5185m         3541             Oxidation         Abs/.1mm         *ASTM D7414         >25         15.2             Base Number (BN)         mg KOH/g         ASTM D2896         10.1         8.2								
Phosphorus         ppm         ASTM D5185m         1150         1082             Zinc         ppm         ASTM D5185m         1270         1261             Sulfur         ppm         ASTM D5185m         3541             Oxidation         Abs/.1mm         *ASTM D7414         >25         15.2             Base Number (BN)         mg KOH/g         ASTM D2896         10.1         8.2		•						
Zinc         ppm         ASTM D5185m         1270         1261             Sulfur         ppm         ASTM D5185m         3541             Oxidation         Abs/.1mm         *ASTM D7414         >25         15.2             Base Number (BN)         mg KOH/g         ASTM D2896         10.1         8.2								
Sulfur         ppm         ASTM D5185m         3541             Oxidation         Abs/.1mm         *ASTM D7414         >25         15.2             Base Number (BN)         mg KOH/g         ASTM D2896         10.1         8.2								
Oxidation         Abs/.1mm         *ASTM D7414         >25         15.2             Base Number (BN)         mg KOH/g         ASTM D2896         10.1         8.2					1270			
Base Number (BN)         mg KOH/g         ASTM D2896         10.1         8.2								
Visc @ 100°C cSt ASTM D445 15.5 13.7								
		Visc @ 100°C	cSt	ASTM D445	15.5	13.7		







Certificate L2367

Laboratory

Sample No.

Lab Number : 06160181 Unique Number: 10995604 Test Package : MOB 1 ( Additional Tests: TBN )

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0875519

Received **Tested** Diagnosed

: 26 Apr 2024 : 26 Apr 2024 - Wes Davis

: 25 Apr 2024

**OAKRIDGE WASTE** 307 WHITE ST DANBURY, CT US 06810 Contact: CHRIS CONTI

chris.conti@oakridgewaste.com T:

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)

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