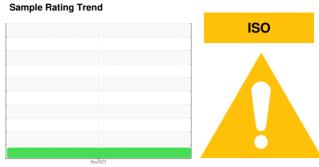


OIL ANALYSIS REPORT

ZIMMERMAN 2433 - ZIMMERMAN

Front Differential

{not provided} (--- GAL)



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 6 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

				Nov2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0900772		
Sample Date		Client Info		25 Nov 2023		
Machine Age	mls	Client Info		80212		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	199		
Chromium	ppm	ASTM D5185m	>10	3		
Nickel	ppm	ASTM D5185m	>10	4		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>25	2		
Lead	ppm	ASTM D5185m	>25	3		
Copper	ppm	ASTM D5185m	>100	19		
Tin	ppm	ASTM D5185m	>10	2		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		67		
Barium	ppm	ASTM D5185m		2		
Molybdenum	ppm	ASTM D5185m		<1		
Manganese	ppm	ASTM D5185m		7		
Magnesium	ppm	ASTM D5185m		192		
Calcium	ppm	ASTM D5185m		6		
Phosphorus	ppm	ASTM D5185m		1706		
Zinc	ppm	ASTM D5185m		10		
Sulfur	ppm	ASTM D5185m		26970		
CONTAMINANTS	1	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	24		
Sodium	ppm	ASTM D5185m		5		
Potassium	ppm	ASTM D5185m	>20	2		
Water	%	ASTM D6304	>.2	0.049		
ppm Water	ppm	ASTM D6304	>2000	499		
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	<u> </u>		
Particles >6µm		ASTM D7647	>5000	976		
Particles >14µm		ASTM D7647	>640	29		
Particles >21µm		ASTM D7647	>160	9		
Particles >38µm		ASTM D7647	>40	1		
Particles >71µm		ASTM D7647	>10	0		
Oil Cleanliness		ISO 4406 (c)	>21/19/16	23/17/12		
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.57		



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: WC0900772 Lab Number : 06157696 Unique Number : 10993119

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 23 Apr 2024 **Tested** : 24 Apr 2024 Diagnosed : 25 Apr 2024 - Jonathan Hester

Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI) To discuss this sample report, contact Customer Service at 1-800-237-1369. st - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

500 WHITE PLAINS RD TARRYTOWN, NY

US 10591 Contact: GIANNA CREDAROLI gianna.credaroli@basf.com

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