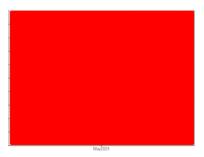


PROBLEM SUMMARY

Sample Rating Trend







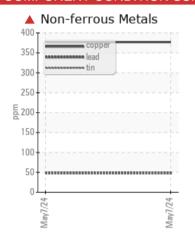
Machine Id

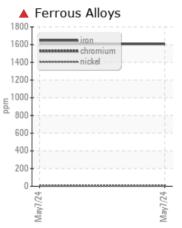
171
Component

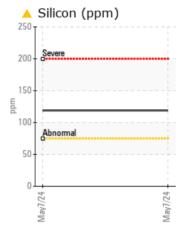
Front Differential

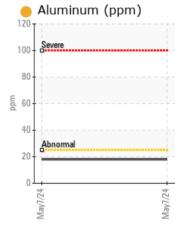
GEAR OIL SAE 75W90 (--- QTS)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS								
Sample Status				SEVERE				
Iron	ppm	ASTM D5185m	>500	1607				
Lead	ppm	ASTM D5185m	>25	48				
Copper	ppm	ASTM D5185m	>100	▲ 377				
Tin	ppm	ASTM D5185m	>10	47				
Silicon	ppm	ASTM D5185m	>75	<u> </u>				
White Metal	scalar	*Visual	NONE	HEAVY				

Customer Id: GASMAN Sample No.: PCA0124604 Lab Number: 06193554 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

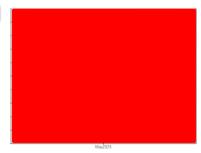
RECOMMENDED ACTIONS						
Action	Status	Date	Done By	Description		
Inspect Wear Source			?	We advise that you inspect for the source(s) of wear.		
Resample			?	We recommend an early resample to monitor this condition.		
Check Dirt Access			?	We advise that you check all areas where dirt can enter the system.		

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id

171 Component

Front Differential

GEAR OIL SAE 75W90 (--- QTS)

DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

A Wear

Bearing and/or gear wear is indicated.

Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

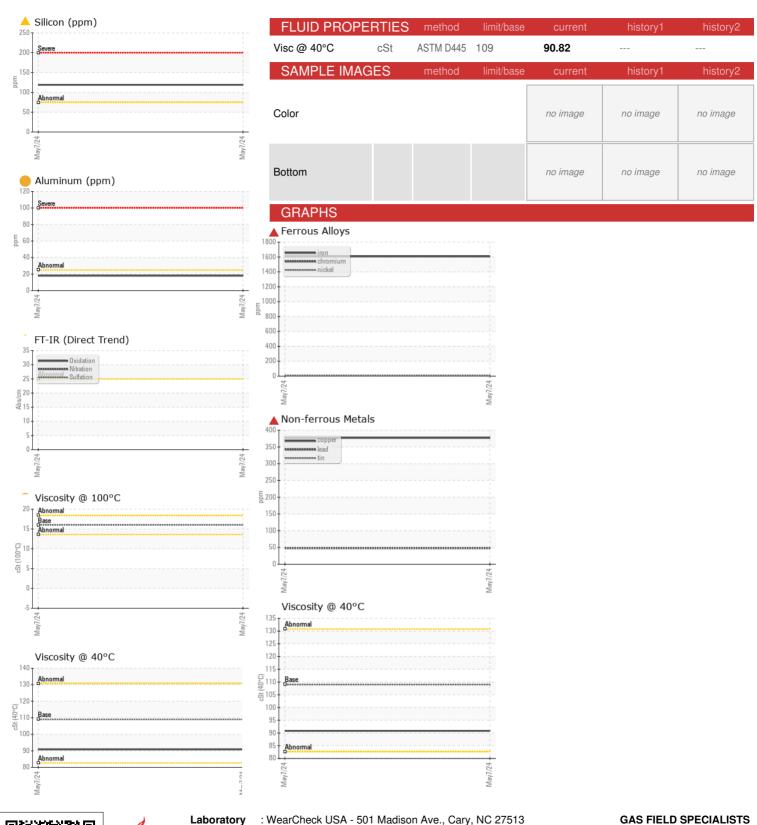
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sample Number Client Info PCA0124604	0.4451 E 1115051	TION					
Client Info		1A HON	method	limit/base		history1	history2
Machine Age mls Client Info 375963	Sample Number		Client Info				
Oil Age mls Client Info 375963	Sample Date		Client Info		07 May 2024		
Contamper Con	Machine Age	mls	Client Info		375963		
Sewer CONTAMINATION method limit/base current history1 history2	Oil Age	mls	Client Info		375963		
CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		Changed		
Weder	Sample Status				SEVERE		
WEAR METALS method limit/base current history1 history2 ron ppm ASTM D5185m >50.0 ▲ 1607 Chromium ppm ASTM D5185m >10 6 Nickel ppm ASTM D5185m >10 6 Silver ppm ASTM D5185m <1	CONTAMINATION	ON	method	limit/base	current	history1	history2
Description	Water		WC Method	>.2	NEG		
ASTM D5185m >10	WEAR METALS	3	method	limit/base	current	history1	history2
ASTM D5185m STM D5185m S	ron	ppm	ASTM D5185m	>500	1607		
Silver	Chromium	ppm	ASTM D5185m	>10	7		
ASTM D5185m S25	Nickel	ppm	ASTM D5185m	>10	6		
ASTM D5185m -25	- itanium	ppm	ASTM D5185m		<1		
Astmoderage	Silver	ppm	ASTM D5185m		<1		
Astronomic Ast	Aluminum		ASTM D5185m	>25	<u> </u>		
Description	ead		ASTM D5185m	>25	48		
ASTM D5185m	Copper		ASTM D5185m	>100	A 377		
Anadium	• •		ASTM D5185m	>10	4 7		
ADDITIVES	/anadium				<1		
ADDITIVES							
Soron ppm ASTM D5185m 400 218 Sarium ppm ASTM D5185m 200 5 Molybdenum ppm ASTM D5185m 12 2 Manganese ppm ASTM D5185m 12 17 Manganese ppm ASTM D5185m 12 17 Manganesium ppm ASTM D5185m 12 17 Manganesium ppm ASTM D5185m 150 189 Manganesium ppm ASTM D5185m 1650 1396 Manganesium ppm ASTM D5185m 125 34 Manganesium ppm ASTM D5185m 125 34 Manganesium ppm ASTM D5185m 22500 27862 Manganesium ppm ASTM D5185m >75 119 Manganesium ppm ASTM D5185m >75 119 Manganesium ppm ASTM D5185m >20 3 Manganesium ppm ASTM D5185m >20 3 Manganesium ppm ASTM D5185m >20 3 Manganesium ppm ASTM D5185m >20 3 Manganesium ppm ASTM D5185m >20 3 Manganesium ppm ASTM D5185m >20 3 Manganesium ppm ASTM D5185m >20 3 Manganesium ppm ASTM D5185m >75		ррш		12 21 /1		late to a sold	la la tarre O
Description	ADDITIVES		method	ilmit/base		nistory i	nistory2
Molybdenum ppm ASTM D5185m 12 2 Manganese ppm ASTM D5185m 17 Magnesium ppm ASTM D5185m 12 17 Calcium ppm ASTM D5185m 150 189 Phosphorus ppm ASTM D5185m 125 34 Gulfur ppm ASTM D5185m 125 34 Sulfur ppm ASTM D5185m 22500 27862 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 119 Coldium ppm ASTM D5185m >20 3 Potassium ppm ASTM D5185m >20 3 VISUAL method limit/base current history1 history2 Vile Metal	Boron	ppm	ASTM D5185m	400			
Adanganese ppm ASTM D5185m 17 Agnesium ppm ASTM D5185m 12 17 Calcium ppm ASTM D5185m 150 189 Phosphorus ppm ASTM D5185m 125 34 Func ppm ASTM D5185m 125 34 Sulfur ppm ASTM D5185m 125 34 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 119 Solium ppm ASTM D5185m >20 3 Solium ppm ASTM D5185m >20 3 VISUAL method limit/base current history1 history2 Visual NONE NONE NONE	Barium	ppm	ASTM D5185m	200	5		
Magnesium ppm ASTM D5185m 12 17 Calcium ppm ASTM D5185m 150 189 Phosphorus ppm ASTM D5185m 1650 1396 Zinc ppm ASTM D5185m 125 34 Sulfur ppm ASTM D5185m 22500 27862 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 119 Sodium ppm ASTM D5185m >20 3 Potassium ppm ASTM D5185m >20 3 VISUAL method limit/base current history1 history2 Visual NONE NONE Visual NONE NONE <td>Nolybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>12</td> <td>2</td> <td></td> <td></td>	Nolybdenum	ppm	ASTM D5185m	12	2		
Description	Manganese	ppm	ASTM D5185m		17		
Phosphorus ppm ASTM D5185m 1650 1396 Zinc ppm ASTM D5185m 125 34 Sulfur ppm ASTM D5185m 22500 27862 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 119 Bodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 3 VISUAL method limit/base current history1 history2 Visual NONE HEAVY Viellow Metal scalar *Visual NONE NONE Potassium visual NONE NONE </td <td>/lagnesium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>12</td> <td>17</td> <td></td> <td></td>	/lagnesium	ppm	ASTM D5185m	12	17		
Contamination	Calcium	ppm	ASTM D5185m	150	189		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 119 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 3 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE HEAVY Yellow Metal scalar *Visual NONE NONE Yerecipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Appearance scalar *Visual NORML	Phosphorus	ppm	ASTM D5185m	1650	1396		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 119 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 3 VISUAL method limit/base current history1 history2 VisuAL method limit/base current history1 history2 VisuAL method limit/base current history1 history2 Visia NONE HEAVY Yellow Metal scalar *Visual NONE Yellow Metal scalar *Visual NONE Yellow Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE <td< td=""><td>Zinc Zinc</td><td>ppm</td><td>ASTM D5185m</td><td>125</td><td>34</td><td></td><td></td></td<>	Zinc Zinc	ppm	ASTM D5185m	125	34		
Solicon	Sulfur	ppm	ASTM D5185m	22500	27862		
Sodium	CONTAMINANT	ΓS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 3 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE Vellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	Silicon	ppm	ASTM D5185m	>75	<u> </u>		
Potassium ppm ASTM D5185m >20 3 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	Sodium	ppm	ASTM D5185m		6		
White Metal scalar *Visual NONE HEAVY Vellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	Potassium		ASTM D5185m	>20	3		
Vellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Dodor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	Vhite Metal	scalar	*Visual	NONE	▲ HEAVY		
Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Dodor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	ellow Metal	scalar	*Visual	NONE	NONE		
Silt scalar *Visual NONE NONE Scalar *Visual NONE NONE NONE Scalar *Visual NONE NONE NONE Scalar *Visual NONE NONE NORML Scalar *Visual NORML NORML Scalar *Visual NORML NORML Scalar *Visual NORML NORML Scalar *Visual >.2 NEG	Precipitate		*Visual		NONE		
Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Suppearance scalar *Visual NORML NORML Scalar *Visual NORML NORML Scalar *Visual NORML NORML Scalar *Visual >.2 NEG		scalar			NONE		
Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG							
Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG							
Odor scalar *Visual NORML NORML							
Emulsified Water scalar *Visual >.2 NEG							
				~			

Contact/Location: TARA MUIRHEAD - GASMAN



OIL ANALYSIS REPORT





Certificate 12367

Laboratory Sample No.

: PCA0124604 Lab Number : 06193554 Unique Number : 11050306

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 29 May 2024 **Tested** : 03 Jun 2024 Diagnosed

: 03 Jun 2024 - Jonathan Hester

Test Package: FLEET (Additional Tests: FT-IR, KV100) 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: Contact/Location: TARA MUIRHEAD - GASMAN

Report Id: GASMAN [WUSCAR] 06193554 (Generated: 06/04/2024 01:13:00) Rev: 1

114 PA-660

US 16933

T:

MANSFIELD, PA

Contact: TARA MUIRHEAD

tara.muirhead@gfsinc.net