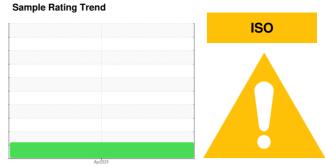


# **OIL ANALYSIS REPORT**

# KW OF LA **KW OF LA P625019**

**Rear Differential** 

{not provided} (--- GAL)



## DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

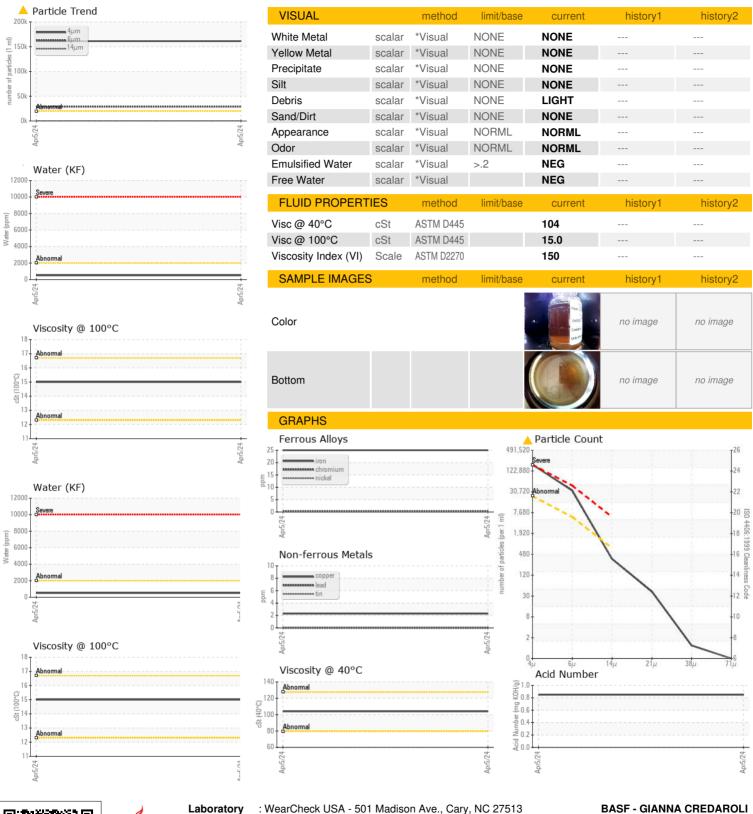
#### **Fluid Condition**

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

Sample Number Sample Date    Client Info   Sample Date   Client Info   Sample Date   Client Info   Sample Date   Client Info   Sample Sample Sample Sample Sample Sample Sample Sample Sample Status   Client Info   N/A					Apr2024		
Sample Date   Client Info   05 Apr 2024	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 0	Sample Number		Client Info		WC0934565		
Oil Age         mls         Client Info         N/A             Sample Status         MEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >500         25             Chromium         ppm         ASTM D5185m         >10         <1	Sample Date		Client Info		05 Apr 2024		
Cilient Info   N/A	Machine Age	mls	Client Info		37		
WEAR METALS         method         fimit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >500         25             Chromium         ppm         ASTM D5185m         >10         <1	Oil Age	mls	Client Info		0		
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >500         25	Oil Changed		Client Info		N/A		
Chromium	Sample Status				ABNORMAL		
Chromium         ppm         ASTM D5185m         >10         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m > 10 0	Iron	ppm	ASTM D5185m	>500	25		
Titanium	Chromium	ppm	ASTM D5185m	>10	<1		
Silver	Nickel	ppm	ASTM D5185m	>10	0		
Aluminum         ppm         ASTM D5185m         >25         0             Lead         ppm         ASTM D5185m         >25         0             Copper         ppm         ASTM D5185m         >10         2             Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         1              Cadmium         ppm         ASTM D5185m         0              Boron         ppm         ASTM D5185m         80              Barium         ppm         ASTM D5185m         0              Manganese         ppm         ASTM D5185m         3              Magnesium         ppm         ASTM D5185m         184              Calcium         ppm         ASTM D5185m         1601              Phosphorus         ppm         ASTM D5185m         20 <td>Titanium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>0</td> <td></td> <td></td>	Titanium	ppm	ASTM D5185m		0		
Lead         ppm         ASTM D5185m         >25         0             Copper         ppm         ASTM D5185m         >100         2             Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         <1	Silver	ppm	ASTM D5185m		0		
Copper         ppm         ASTM D5185m         >10.0         2             Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         80             Barium         ppm         ASTM D5185m         2             Molybdenum         ppm         ASTM D5185m         3             Manganese         ppm         ASTM D5185m         3             Manganesium         ppm         ASTM D5185m         184             Calcium         ppm         ASTM D5185m         1601             Phosphorus         ppm         ASTM D5185m         14             Zinc         ppm         ASTM D5185m         27191             CONTAMINANTS         method         limit/base         cu	Aluminum	ppm	ASTM D5185m	>25	0		
Tin	Lead	ppm	ASTM D5185m	>25	0		
Tin	Copper	ppm	ASTM D5185m	>100	2		
Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         80             Barium         ppm         ASTM D5185m         2             Molybdenum         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         184             Calcium         ppm         ASTM D5185m         1601             Phosphorus         ppm         ASTM D5185m         1601             Zinc         ppm         ASTM D5185m         14             Sulfur         ppm         ASTM D5185m         27191             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         20         <1             Sodium         ppm         ASTM D5185m         20		ppm	ASTM D5185m	>10	0		
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         80             Barium         ppm         ASTM D5185m         2             Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         3             Magnesium         ppm         ASTM D5185m         6             Calcium         ppm         ASTM D5185m         1601             Phosphorus         ppm         ASTM D5185m         14             Zinc         ppm         ASTM D5185m         27191             Sulfur         ppm         ASTM D5185m         27191             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         30             Sodium         ppm         ASTM D5185m         >20 <td>Vanadium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>&lt;1</td> <td></td> <td></td>	Vanadium	ppm	ASTM D5185m		<1		
Boron ppm ASTM D5185m 80	Cadmium	ppm	ASTM D5185m		0		
Barium ppm ASTM D5185m 0	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         3             Magnesium         ppm         ASTM D5185m         184             Calcium         ppm         ASTM D5185m         1601             Phosphorus         ppm         ASTM D5185m         27191             Zinc         ppm         ASTM D5185m         27191             Sulfur         ppm         ASTM D5185m         27191             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         30             Sodium         ppm         ASTM D5185m         4             Potassium         ppm         ASTM D5185m         20         <1	Boron	ppm	ASTM D5185m		80		
Manganese         ppm         ASTM D5185m         3             Magnesium         ppm         ASTM D5185m         184             Calcium         ppm         ASTM D5185m         1601             Phosphorus         ppm         ASTM D5185m         14             Zinc         ppm         ASTM D5185m         27191             Sulfur         ppm         ASTM D5185m         27191             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         30             Sodium         ppm         ASTM D5185m         20         <1	Barium	ppm	ASTM D5185m		2		
Magnesium         ppm         ASTM D5185m         184             Calcium         ppm         ASTM D5185m         6             Phosphorus         ppm         ASTM D5185m         1601             Zinc         ppm         ASTM D5185m         27191             Sulfur         ppm         ASTM D5185m         27191             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         30             Sodium         ppm         ASTM D5185m         >4             Potassium         ppm         ASTM D5185m         >20         <1	Molybdenum	ppm	ASTM D5185m		0		
Calcium         ppm         ASTM D5185m         6             Phosphorus         ppm         ASTM D5185m         1601             Zinc         ppm         ASTM D5185m         27191             Sulfur         ppm         ASTM D5185m         27191             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         30             Sodium         ppm         ASTM D5185m         >20         <1		ppm	ASTM D5185m		3		
Phosphorus         ppm         ASTM D5185m         1601             Zinc         ppm         ASTM D5185m         14             Sulfur         ppm         ASTM D5185m         27191             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         30             Sodium         ppm         ASTM D5185m         4             Potassium         ppm         ASTM D5185m         >20         <1            Water         %         ASTM D5185m         >20         <1             Water         %         ASTM D5185m         >20         <1             Potassium         ppm         ASTM D6304         >2         0.050             Water         %         ASTM D6304         >2         0.050             FLUID CLEANLINESS         method         limit/base         current         history1         history2 <th< td=""><td>Magnesium</td><td>ppm</td><td>ASTM D5185m</td><td></td><td>184</td><td></td><td></td></th<>	Magnesium	ppm	ASTM D5185m		184		
Zinc   ppm   ASTM D5185m   27191       Sulfur   ppm   ASTM D5185m   27191         Sulfur   ppm   ASTM D5185m   27191         Sodium   ppm   ASTM D5185m   >75   30         Sodium   ppm   ASTM D5185m   4           Potassium   ppm   ASTM D5185m   >20   <1           Potassium   ppm   ASTM D6304   >.2   0.050         Popm Water   ppm   ASTM D6304   >.2   0.050         Popm Water   ppm   ASTM D6304   >.2   0.050       Popm Water   ppm   ASTM D6304   >.2   0.050       Popm Water   ppm   ASTM D6304   >.2   0.050       Popm Water   ppm   ASTM D6304   >.2   0.050       Popm Water   ppm   ASTM D7647   >000   ▲ 161104       Popm Water   ASTM D7647   >640   № 160   № 161104       Popm Water   ASTM D7647   >640   № 160   № 161104       Popm Water   ASTM D7647   >160   № 160   № 161104         Popm Water   ASTM D7647   >100   № 161104         Popm Water   ASTM D7647   >10   № 160   № 161104         Popm Water   ASTM D7647   >10   № 160   № 161104           Popm Water   ASTM D7647   >10   № 160   № 161104           Popm Water   ASTM D7647   >10   № 160   № 161104           Popm Water   ASTM D7647   >10   № 160   № 161104               Popm Water   ASTM D7647   >10   № 160	Calcium	ppm	ASTM D5185m		6		
Sulfur         ppm         ASTM D5185m         27191             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         30             Sodium         ppm         ASTM D5185m         4             Potassium         ppm         ASTM D5185m         >20         <1	Phosphorus	ppm	ASTM D5185m		1601		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         30             Sodium         ppm         ASTM D5185m         4             Potassium         ppm         ASTM D5185m         >20         <1	Zinc	ppm	ASTM D5185m		14		
Silicon ppm ASTM D5185m >75 30 Sodium ppm ASTM D5185m 4 Sodium ppm ASTM D5185m 20 <1 Sodium ppm ASTM D5185m >20 <1 Sodium ppm ASTM D6304 >.2 0.050 Sodium ppm ASTM D7647 >.2 0.000	Sulfur	ppm	ASTM D5185m		27191		
Sodium	CONTAMINANTS	3	method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         4             Potassium         ppm         ASTM D5185m         >20         <1	Silicon	ppm	ASTM D5185m	>75	30		
Water         %         ASTM D6304         >.2         0.050             ppm Water         ppm         ASTM D6304         >2000         509             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >20000         Δ 161104             Particles >6μm         ASTM D7647         >5000         Δ 28978             Particles >14μm         ASTM D7647         >640         311             Particles >21μm         ASTM D7647         >160         36             Particles >38μm         ASTM D7647         >40         1             Particles >71μm         ASTM D7647         >10         0             Oil Cleanliness         ISO 4406 (c)         >21/19/16         25/22/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Sodium	ppm	ASTM D5185m		4		
Water         %         ASTM D6304         >.2         0.050             ppm Water         ppm         ASTM D6304         >2000         509             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >20000         ▲ 161104             Particles >6μm         ASTM D7647         >5000         ▲ 28978             Particles >14μm         ASTM D7647         >640         311             Particles >21μm         ASTM D7647         >160         36             Particles >38μm         ASTM D7647         >40         1             Particles >71μm         ASTM D7647         >10         0             Oil Cleanliness         ISO 4406 (c)         >21/19/16         25/22/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Potassium	ppm	ASTM D5185m	>20	<1		
ppm Water         ppm ASTM D6304         >2000         509             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >20000         ▲ 161104             Particles >6μm         ASTM D7647         >5000         ▲ 28978             Particles >14μm         ASTM D7647         >640         311             Particles >21μm         ASTM D7647         >160         36             Particles >38μm         ASTM D7647         >40         1             Particles >71μm         ASTM D7647         >10         0             Poil Cleanliness         ISO 4406 (c)         >21/19/16         Δ 25/22/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Water		ASTM D6304	>.2	0.050		
Particles >4μm       ASTM D7647       >20000       ▲ 161104           Particles >6μm       ASTM D7647       >5000       ▲ 28978           Particles >14μm       ASTM D7647       >640       311           Particles >21μm       ASTM D7647       >160       36           Particles >38μm       ASTM D7647       >40       1           Particles >71μm       ASTM D7647       >10       0           Oil Cleanliness       ISO 4406 (c)       >21/19/16       25/22/15           FLUID DEGRADATION       method       limit/base       current       history1       history2	ppm Water	ppm					
Particles >6μm       ASTM D7647       >5000       28978           Particles >14μm       ASTM D7647       >640       311           Particles >21μm       ASTM D7647       >160       36           Particles >38μm       ASTM D7647       >40       1           Particles >71μm       ASTM D7647       >10       0           Oil Cleanliness       ISO 4406 (c)       >21/19/16       25/22/15           FLUID DEGRADATION       method       limit/base       current       history1       history2	FLUID CLEANLIN	NESS	method	limit/base	current	history1	history2
Particles >14μm       ASTM D7647 >640       311           Particles >21μm       ASTM D7647 >160       36           Particles >38μm       ASTM D7647 >40       1           Particles >71μm       ASTM D7647 >10       0           Oil Cleanliness       ISO 4406 (c) >21/19/16 ▲ 25/22/15           FLUID DEGRADATION       method       limit/base       current       history1       history2	Particles >4µm		ASTM D7647	>20000	<b>161104</b>		
Particles >21μm         ASTM D7647         >160         36             Particles >38μm         ASTM D7647         >40         1             Particles >71μm         ASTM D7647         >10         0             Oil Cleanliness         ISO 4406 (c)         >21/19/16         25/22/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >6µm		ASTM D7647	>5000	<b>28978</b>		
Particles >21μm         ASTM D7647         >160         36             Particles >38μm         ASTM D7647         >40         1             Particles >71μm         ASTM D7647         >10         0             Oil Cleanliness         ISO 4406 (c)         >21/19/16         25/22/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >14µm		ASTM D7647	>640	311		
Particles >38μm         ASTM D7647         >40         1             Particles >71μm         ASTM D7647         >10         0             Oil Cleanliness         ISO 4406 (c)         >21/19/16         25/22/15             FLUID DEGRADATION         method         limit/base         current         history1         history2			ASTM D7647	>160	36		
Particles >71μm         ASTM D7647         >10         0              Oil Cleanliness         ISO 4406 (c)         >21/19/16         ▲ 25/22/15             FLUID DEGRADATION         method         limit/base         current         history1         history2	•		ASTM D7647	>40			
Oil Cleanliness ISO 4406 (c) >21/19/16 ▲ 25/22/15 FLUID DEGRADATION method limit/base current history1 history2	•		ASTM D7647	>10	0		
	•			>21/19/16	<b>25/22/15</b>		
	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g			0.85		



## **OIL ANALYSIS REPORT**





Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0934565 Lab Number

: 06195913 Unique Number : 11058036

Received **Tested** Diagnosed

: 02 Jun 2024 - Doug Bogart Test Package : MOB 2 ( Additional Tests: KF, KV100, PrtCount, VI ) To discuss this sample report, contact Customer Service at 1-800-237-1369.

: 30 May 2024

: 02 Jun 2024

 $^st$  - 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)

500 WHITE PLAINS RD

TARRYTOWN, NY US 10591

Contact: MIKE BARRY mike.barry@basf.com

T:

F: