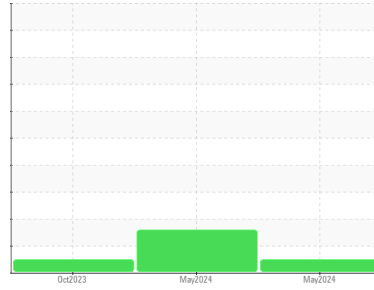




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**TRIO LIET BV 11732972/ING05**  
 Component  
**Gearbox**  
 Fluid  
**SHELL OMALA S4 GX 220 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

### Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PE0002535</b>	PE0003841	PE0002509
Sample Date	Client Info			<b>28 May 2024</b>	14 May 2024	20 Oct 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	ATTENTION	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	<b>NEG</b>	NEG	NEG

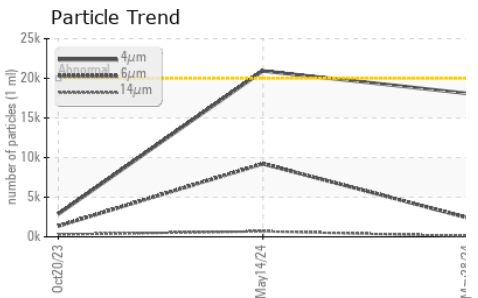
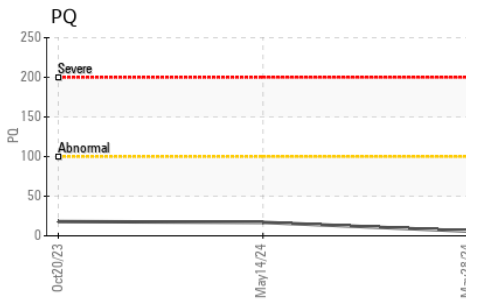
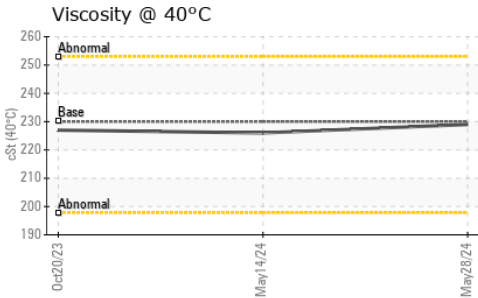
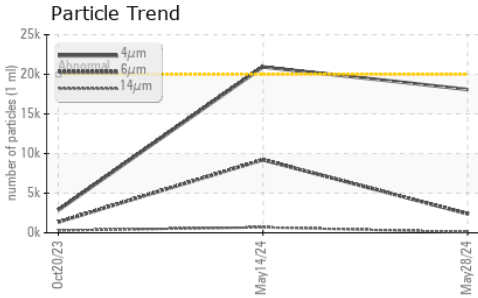
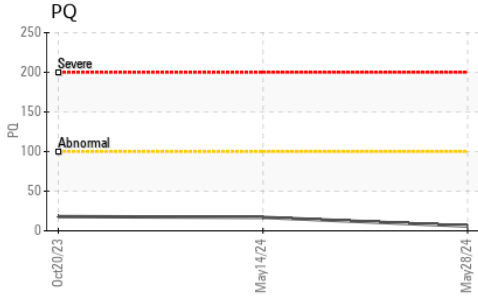
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		<b>6</b>	17	18
Iron	ppm	ASTM D5185m	>200	<b>13</b>	12	11
Chromium	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	1
Lead	ppm	ASTM D5185m	>100	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>200	<b>0</b>	<1	0
Tin	ppm	ASTM D5185m	>25	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>3</b>	11	5
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	0	5
Calcium	ppm	ASTM D5185m		<b>7</b>	2	22
Phosphorus	ppm	ASTM D5185m		<b>389</b>	393	404
Zinc	ppm	ASTM D5185m		<b>281</b>	264	306
Sulfur	ppm	ASTM D5185m		<b>5994</b>	6606	5872

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>4</b>	5	8
Sodium	ppm	ASTM D5185m		<b>3</b>	2	0
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	<b>18088</b>	20933	2852
Particles >6µm		ASTM D7647	>5000	<b>2404</b>	9218	1362
Particles >14µm		ASTM D7647	>640	<b>84</b>	695	297
Particles >21µm		ASTM D7647	>160	<b>20</b>	103	97
Particles >38µm		ASTM D7647	>40	<b>1</b>	6	6
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>21/18/14</b>	22/20/17	19/18/15

# OIL ANALYSIS REPORT

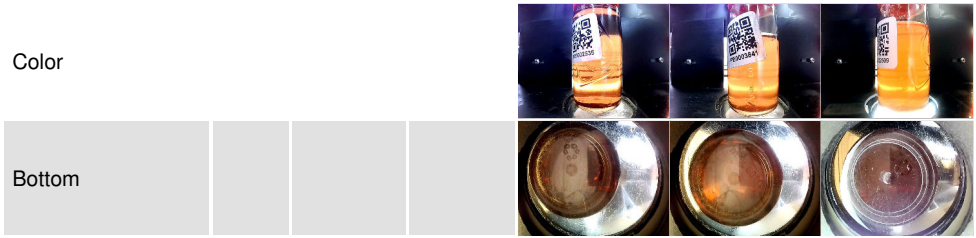


FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.09</b>	1.28	1.39

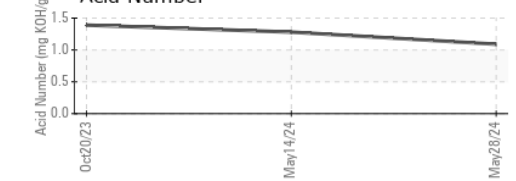
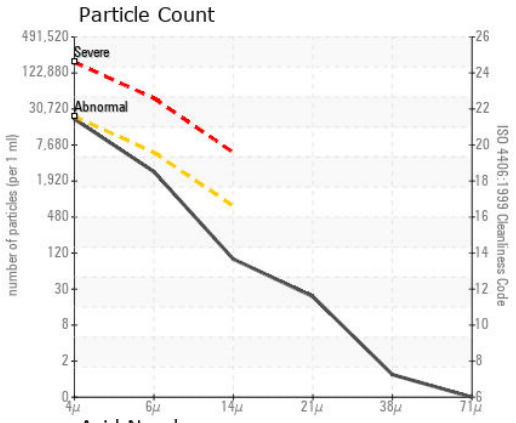
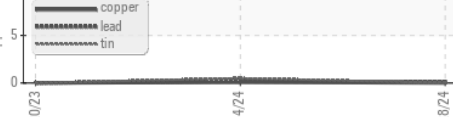
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	<b>229</b>	226	227

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0002535      **Received** : 31 May 2024  
**Lab Number** : **06196544**      **Tested** : 03 Jun 2024  
**Unique Number** : 11058667      **Diagnosed** : 03 Jun 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN )

**MORNING STAR DAIRY**  
 801 FM 694  
 DALHART, TX  
 US 79022  
 Contact: JOHN DEVRIES  
 johndevries@gmail.com

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)