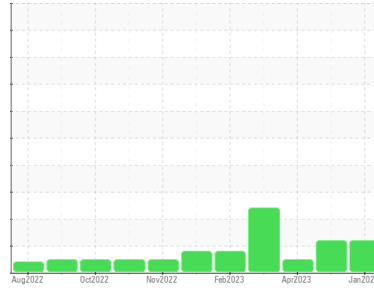


Area  
**Thermoforming**  
 Machine Id  
**Line 13 Extruder (S/N E2374)**  
 Component  
**Bevel Helical Gearbox**  
 Fluid  
**SUMMIT UNIPAR FG-320 (13 GAL)**



## DIAGNOSIS

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

**Wear**  
 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 INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>TO50001540</b>	TO50001786	TO50001548
Sample Date	Client Info	<b>11 Jan 2024</b>	18 Aug 2023	05 Apr 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ATTENTION	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184	<b>15</b>	12	10
Iron	ppm ASTM D5185m >150	<b>1</b>	1	2
Chromium	ppm ASTM D5185m >10	<b>&lt;1</b>	0	0
Nickel	ppm ASTM D5185m >10	<b>0</b>	0	<1
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>2</b>	<1	0
Lead	ppm ASTM D5185m >100	<b>0</b>	0	0
Copper	ppm ASTM D5185m >50	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185m >10	<b>0</b>	0	0
Vanadium	ppm ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	<b>0</b>	0	0
Barium	ppm ASTM D5185m	<b>3</b>	0	1
Molybdenum	ppm ASTM D5185m	<b>0</b>	0	0
Manganese	ppm ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m	<b>0</b>	0	0
Calcium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Phosphorus	ppm ASTM D5185m	<b>651</b>	590	570
Zinc	ppm ASTM D5185m	<b>0</b>	0	2
Sulfur	ppm ASTM D5185m	<b>682</b>	634	507

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >50	<b>10</b>	12	6
Sodium	ppm ASTM D5185m	<b>0</b>	0	0
Potassium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Water	% ASTM D6304 >0.1	<b>0.004</b>	0.00	0.005
ppm Water	ppm ASTM D6304 >1000	<b>43</b>	0.00	52.8

## FLUID CLEANLINESS

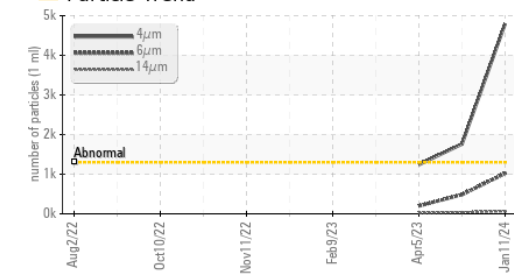
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >1300	<b>▲ 4796</b>	▲ 1762	1241
Particles >6µm	ASTM D7647 >320	<b>▲ 1022</b>	▲ 486	199
Particles >14µm	ASTM D7647 >80	<b>64</b>	38	20
Particles >21µm	ASTM D7647 >20	<b>13</b>	10	9
Particles >38µm	ASTM D7647 >4	<b>0</b>	1	0
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >17/15/13	<b>▲ 19/17/13</b>	▲ 18/16/12	17/15/11

## FLUID DEGRADATION

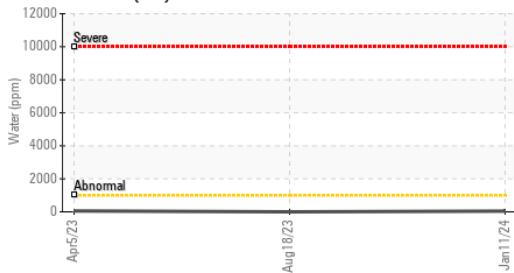
method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045	<b>0.68</b>	0.74	0.70

# OIL ANALYSIS REPORT

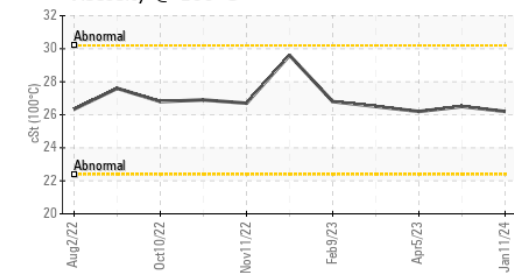
## Particle Trend



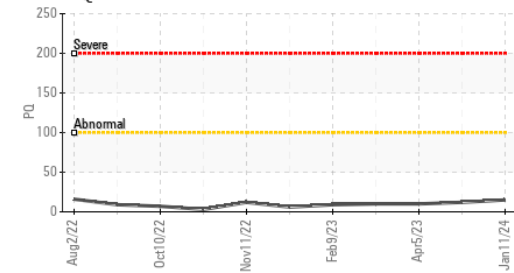
## Water (KF)



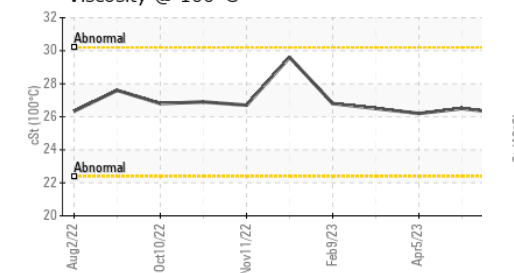
## Viscosity @ 100°C



## PQ



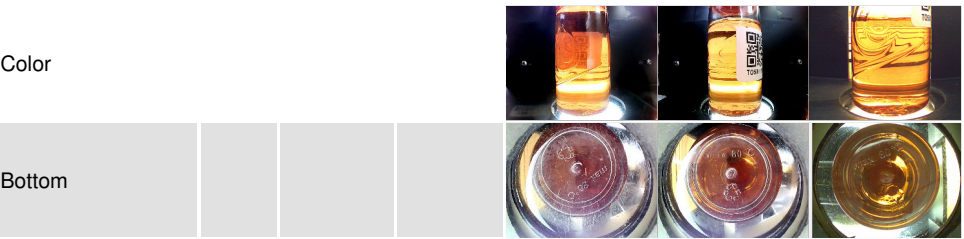
## Viscosity @ 100°C



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

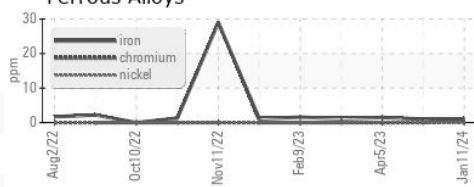
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	290	293	288
Visc @ 100°C	cSt	ASTM D445	26.2	26.5	26.2
Viscosity Index (VI)	Scale	ASTM D2270	118	118	118

## SAMPLE IMAGES

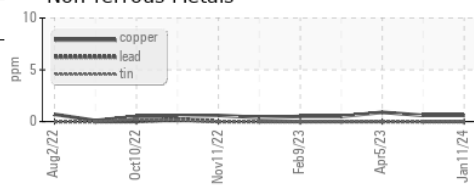


## GRAPHS

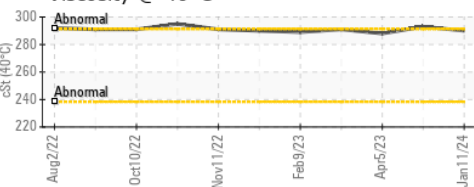
### Ferrous Alloys



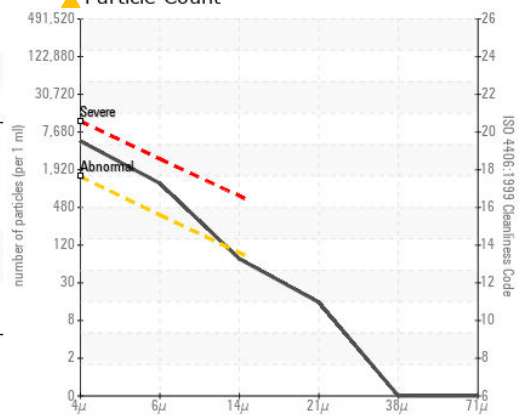
### Non-ferrous Metals



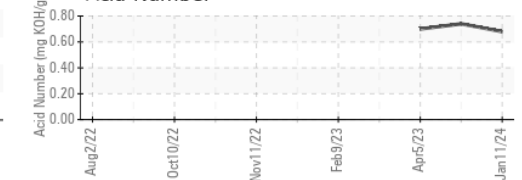
### Viscosity @ 40°C



### Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO50001540 **Received** : 17 Jan 2024  
**Lab Number** : 06063573 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10834955 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, PQ, PrtCount, VI )

**DART CONTAINER CORPORATION**  
 4444 W LEADBETTER DR  
 DALLAS, TX  
 US 75236  
 Contact: YON PALOMINO  
 yon.palomino@dart.biz  
 T: (214)775-5673  
 F:

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)