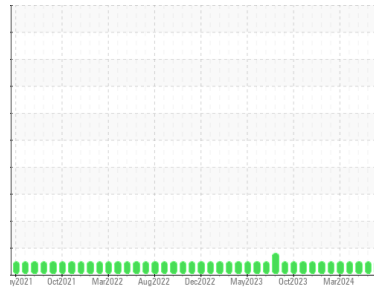




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**SSC**  
 Machine Id  
**NIRO 4 (S/N 006)**  
 Component  
**Transmission (Manual)**  
 Fluid  
**DTE 10 (15 GAL)**

## DIAGNOSIS

**Recommendation**  
 Resample at the next service interval to monitor.

**Wear**  
 All component wear rates are normal.

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

**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>USP0012344</b>	USP0013291	USP0012829
Sample Date	Client Info		<b>12 Jul 2024</b>	10 Jun 2024	24 May 2024
Machine Age	hrs	Client Info	<b>0</b>	56340	56084
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>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>2</b>	<1	<1
Chromium	ppm	ASTM D5185m >5	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >7	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >25	<b>0</b>	0	<1
Lead	ppm	ASTM D5185m >45	<b>1</b>	3	4
Copper	ppm	ASTM D5185m >225	<b>&lt;1</b>	1	1
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	1	2
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185m	<b>54</b>	69	91
Phosphorus	ppm	ASTM D5185m	<b>137</b>	140	155
Zinc	ppm	ASTM D5185m	<b>0</b>	3	<1
Sulfur	ppm	ASTM D5185m	<b>891</b>	969	1119

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >125	<b>&lt;1</b>	1	1
Sodium	ppm	ASTM D5185m	<b>1</b>	1	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	1
Water	%	ASTM D6304 >0.1	<b>0.004</b>	0.003	0.002
ppm Water	ppm	ASTM D6304 >1000	<b>41</b>	37	24

## FLUID CLEANLINESS

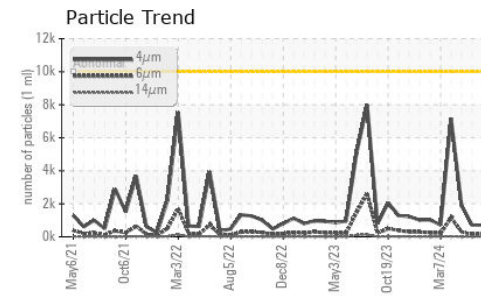
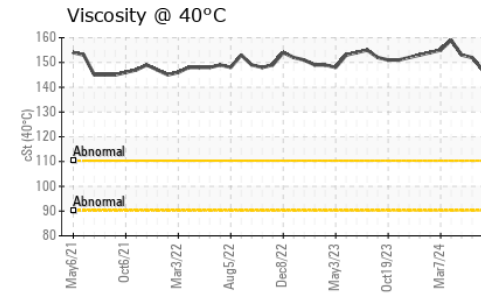
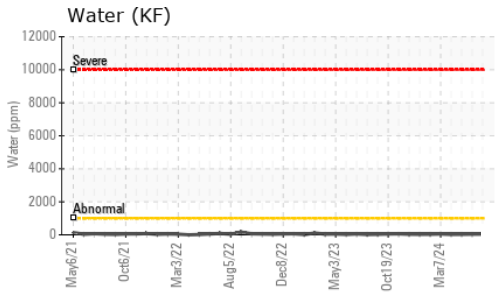
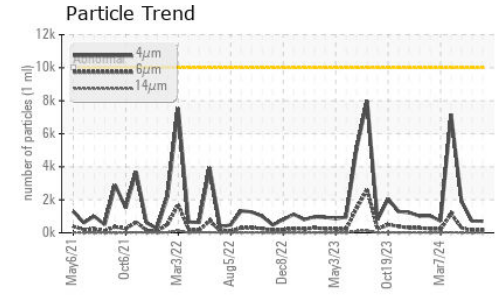
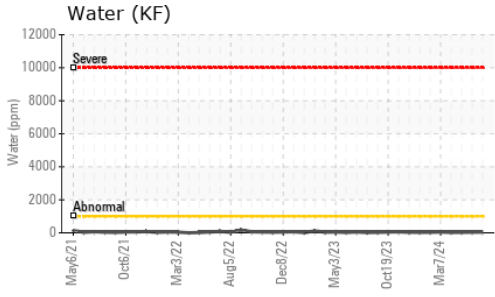
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>700</b>	711	1883
Particles >6µm	ASTM D7647	>2500	<b>203</b>	150	290
Particles >14µm	ASTM D7647	>320	<b>12</b>	3	12
Particles >21µm	ASTM D7647	>80	<b>2</b>	0	2
Particles >38µm	ASTM D7647	>20	<b>1</b>	0	0
Particles >71µm	ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	<b>17/15/11</b>	17/14/9	18/15/11

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.104</b>	0.08	0.086



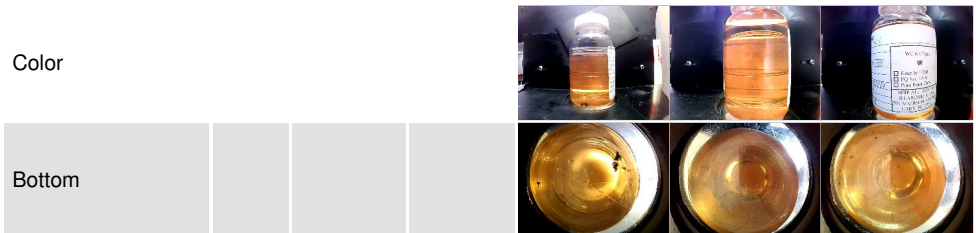
# OIL ANALYSIS REPORT



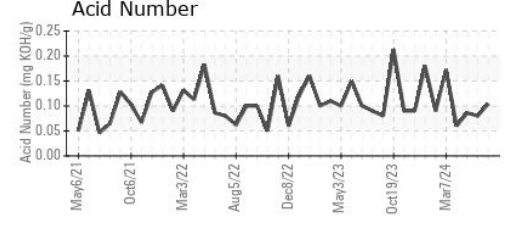
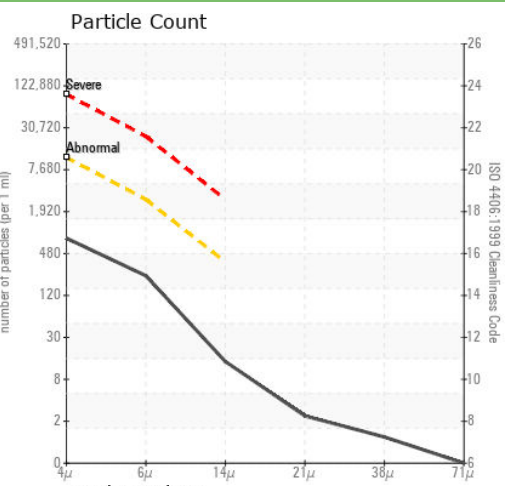
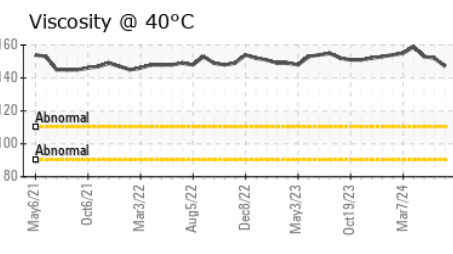
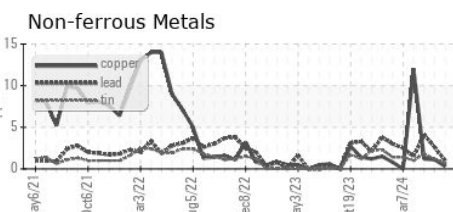
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	147	152	153

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0012344  
**Lab Number** : 06236875  
**Unique Number** : 11125709  
**Test Package** : IND 2  
**Received** : 15 Jul 2024  
**Tested** : 18 Jul 2024  
**Diagnosed** : 18 Jul 2024 - Jonathan Hester

**EMPIRICAL FOODS INC. - BPISOUPRO - EMPSOUPRO**  
 S. SIOUX CITY, NE  
 US  
 Contact:

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)