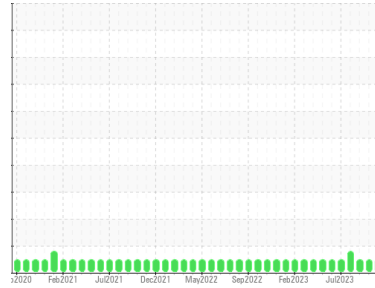




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Area  
**SSC**  
 Machine Id  
**NIRO 4 (S/N 006)**  
 Component  
**Transmission (Manual)**  
 Fluid  
**DTE 10/150 (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>USP246493</b>	USP0002756	USP239568
Sample Date	Client Info		<b>10 Nov 2023</b>	19 Oct 2023	06 Sep 2023
Machine Age	mths	Client Info	<b>0</b>	0	1
Oil Age	mths	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>3</b>	2	<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	0
Silver	ppm	ASTM D5185m >7	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>0</b>	0	0
Lead	ppm	ASTM D5185m >45	<b>3</b>	3	0
Copper	ppm	ASTM D5185m >225	<b>1</b>	3	0
Tin	ppm	ASTM D5185m >10	<b>1</b>	2	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	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>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	<b>0</b>	0	3
Calcium	ppm	ASTM D5185m	<b>65</b>	67	41
Phosphorus	ppm	ASTM D5185m	<b>125</b>	124	179
Zinc	ppm	ASTM D5185m	<b>2</b>	2	5
Sulfur	ppm	ASTM D5185m	<b>925</b>	922	1383

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >125	<b>&lt;1</b>	1	2
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	2	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	<1	1
Water	%	ASTM D6304 >0.1	<b>0.005</b>	0.004	0.003
ppm Water	ppm	ASTM D6304 >1000	<b>59.8</b>	49.1	27.3

### FLUID CLEANLINESS

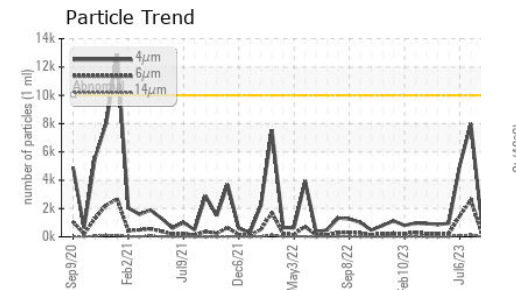
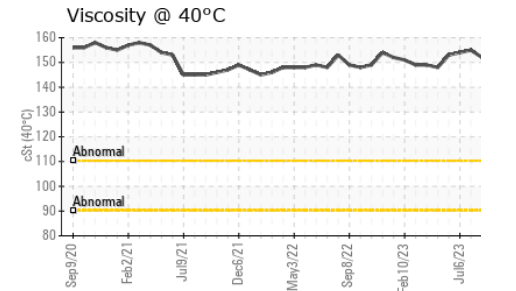
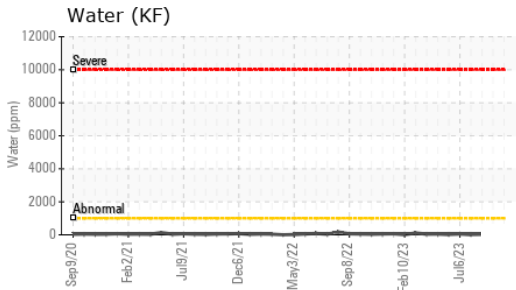
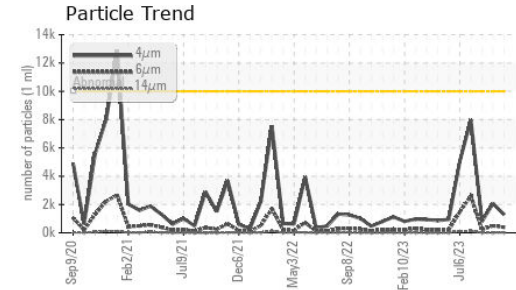
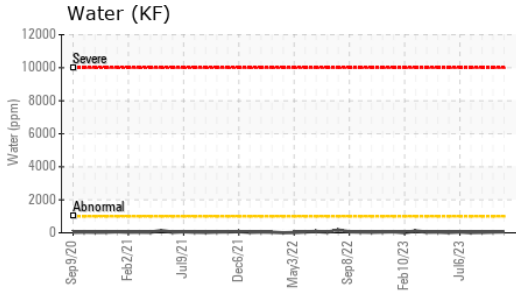
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>1288</b>	2068	804
Particles >6µm	ASTM D7647	>2500	<b>386</b>	494	233
Particles >14µm	ASTM D7647	>320	<b>24</b>	24	16
Particles >21µm	ASTM D7647	>80	<b>5</b>	5	4
Particles >38µm	ASTM D7647	>20	<b>0</b>	1	0
Particles >71µm	ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	<b>17/16/12</b>	18/16/12	17/15/11

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.09</b>	0.213	0.08



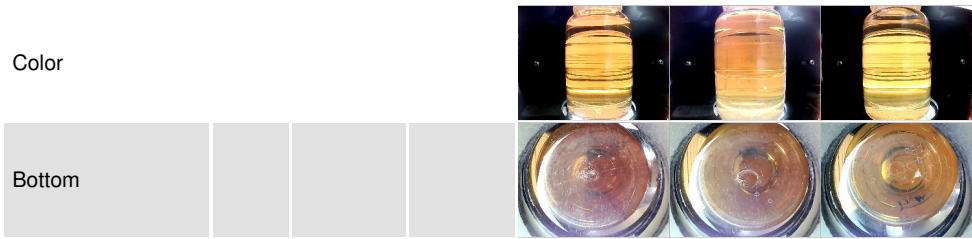
# OIL ANALYSIS REPORT



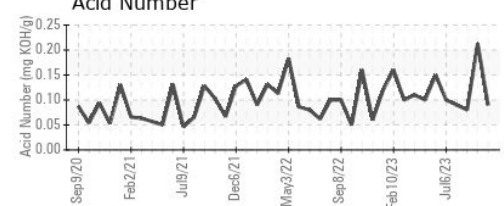
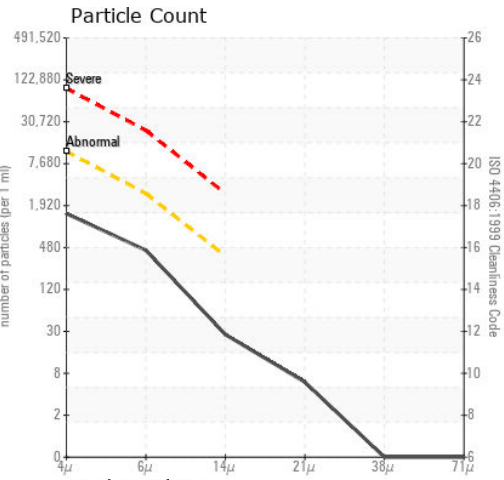
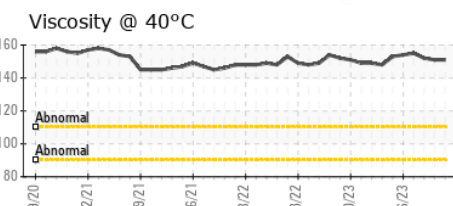
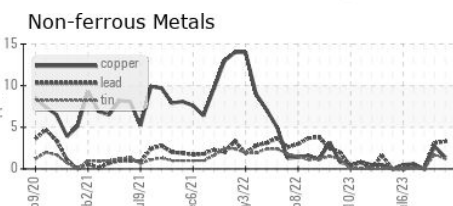
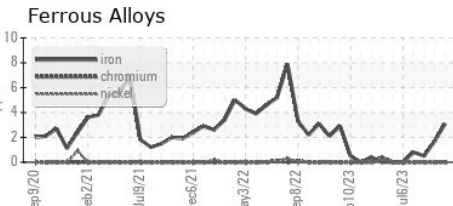
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	151	151	152

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP246493 **Received** : 17 Nov 2023  
**Lab Number** : 06010867 **Diagnosed** : 20 Nov 2023  
**Unique Number** : 10750011 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

**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)

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