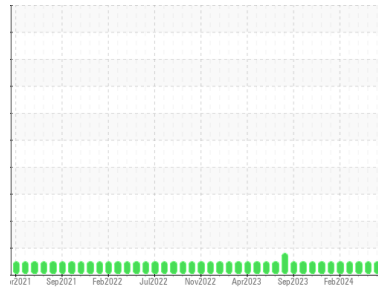




# OIL ANALYSIS REPORT

Area  
**SSC**  
 Machine Id  
**NIRO 4 (S/N 006)**  
 Component  
**Transmission (Manual)**  
 Fluid  
**DTE 10/150 (15 GAL)**

Sample Rating Trend



**NORMAL**



## 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>USP0013291</b>	USP0012829	USP0006780
Sample Date	Client Info		<b>10 Jun 2024</b>	24 May 2024	08 Apr 2024
Machine Age	hrs	Client Info	<b>56340</b>	56084	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>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>&lt;1</b>	<1	2
Chromium	ppm	ASTM D5185m >5	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >7	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >25	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185m >45	<b>3</b>	4	2
Copper	ppm	ASTM D5185m >225	<b>1</b>	1	12
Tin	ppm	ASTM D5185m >10	<b>1</b>	2	1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	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>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	3
Calcium	ppm	ASTM D5185m	<b>69</b>	91	76
Phosphorus	ppm	ASTM D5185m	<b>140</b>	155	477
Zinc	ppm	ASTM D5185m	<b>3</b>	<1	0
Sulfur	ppm	ASTM D5185m	<b>969</b>	1119	1888

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >125	<b>1</b>	1	<1
Sodium	ppm	ASTM D5185m	<b>1</b>	<1	2
Potassium	ppm	ASTM D5185m >20	<b>0</b>	1	2
Water	%	ASTM D6304 >0.1	<b>0.003</b>	0.002	0.002
ppm Water	ppm	ASTM D6304 >1000	<b>37</b>	24	18

## FLUID CLEANLINESS

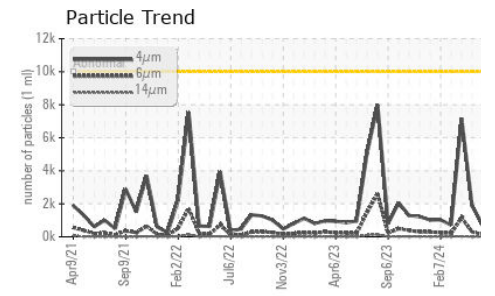
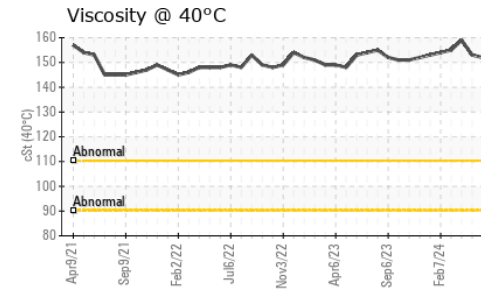
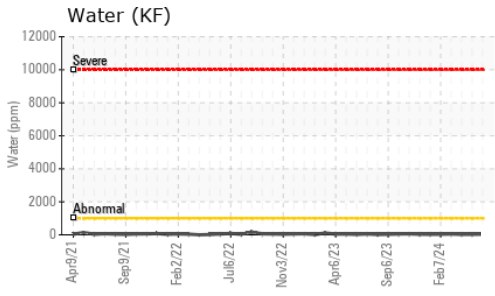
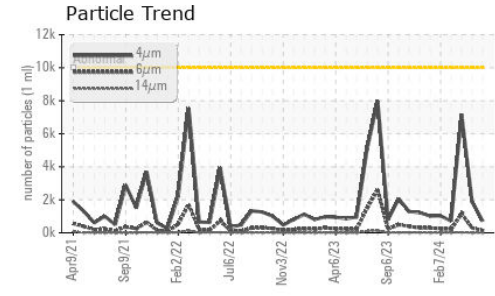
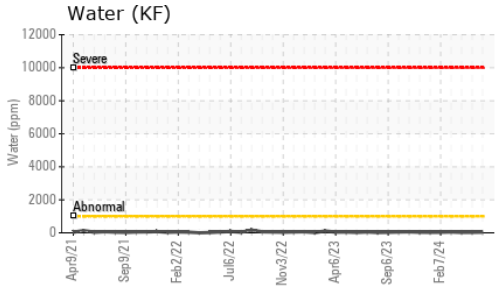
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>711</b>	1883	7172
Particles >6µm	ASTM D7647	>2500	<b>150</b>	290	1149
Particles >14µm	ASTM D7647	>320	<b>3</b>	12	33
Particles >21µm	ASTM D7647	>80	<b>0</b>	2	7
Particles >38µm	ASTM D7647	>20	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	<b>17/14/9</b>	18/15/11	20/17/12

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.08</b>	0.086	0.06



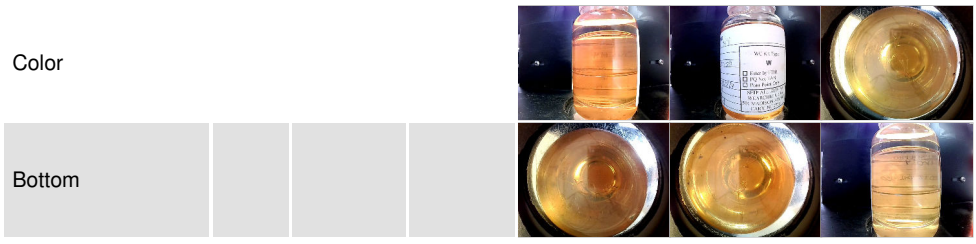
# OIL ANALYSIS REPORT



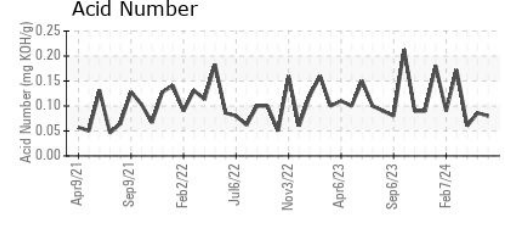
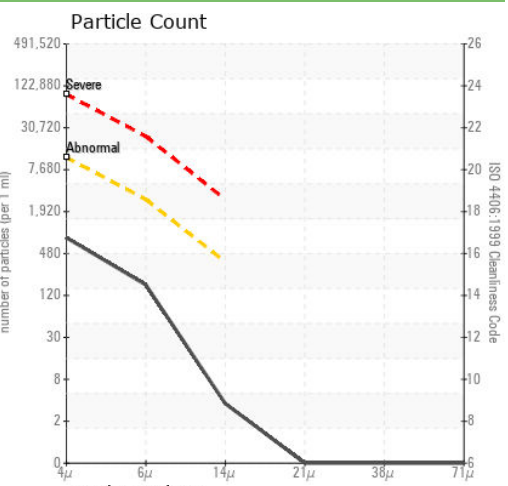
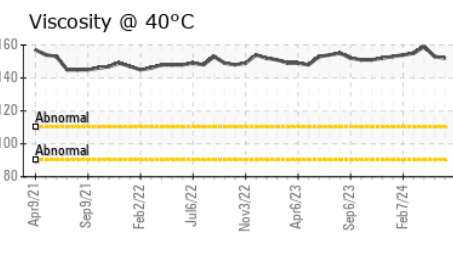
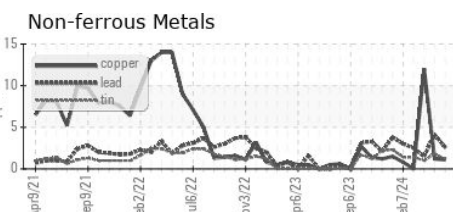
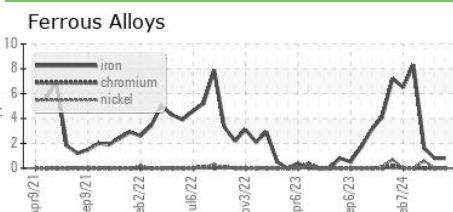
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	152	153	159

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0013291  
**Lab Number** : 06211691  
**Unique Number** : 11084555  
**Test Package** : IND 2  
**Received** : 17 Jun 2024  
**Tested** : 18 Jun 2024  
**Diagnosed** : 20 Jun 2024 - Doug Bogart

**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)