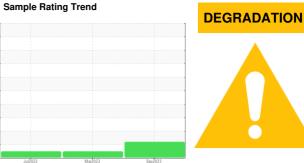


# **PROBLEM SUMMARY**



Machine Id **8119710** Component **Diesel Engine** 

**NOT GIVEN (--- GAL)** 

# **COMPONENT CONDITION SUMMARY**

No relevant graphs to display

# RECOMMENDATION

The oil is near the end of it's useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS						
Sample Status			ABNORM	AL NORMAL	NORMAL	
Base Number (BN)	mg KOH/g	ASTM D2896	△ 3.0	4.1	5.1	

Customer Id: IDETAMFL Sample No.: IL05967306 Lab Number: 05967306 Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

## **RECOMMENDED ACTIONS**

Action	Status	Date	Done by	Description
Service/change Fluid			?	The oil is near the end of it's useful service life, recommend schedule an oil change.

# HISTORICAL DIAGNOSIS

# 19 Mar 2023 Diag: Don Baldridge

#### NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



# 01 Jul 2022 Diag: Jonathan Hester

#### NORMAL



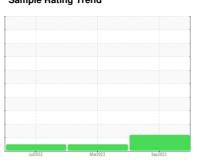
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





# **OIL ANALYSIS REPORT**

Sample Rating Trend



**DEGRADATION** 



# 8119710 Component

**Diesel Engine** 

**NOT GIVEN (--- GAL)** 

# **DIAGNOSIS**

## Recommendation

The oil is near the end of it's useful service life. recommend schedule an oil change. Resample at the next service interval to monitor.

All component wear rates are normal.

# Contamination

There is no indication of any contamination in the oil.

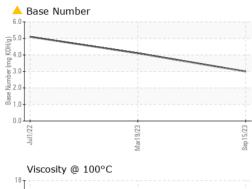
# Fluid Condition

The BN level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION         method         limit/base         current         history1         history2           Sample Number         Client Info         IL05967306         IL05902183         IL05597819           Sample Date         Client Info         15 Sep 2023         19 Mar 2023         01 Jul 2022           Machine Age         mls         Client Info         0         0         0           Oil Changed         Client Info         N/A         N/A         N/A         N/A           Sample Status         Method         ABNORMAL         NORMAL         NORMAL         NORMAL           CONTAMINATION         method         Imitionse         current         history1         history2           Fuel         WC Method         >5         <1.0         <1.0         <1.0         <1.0           Glycol         WC Method         >5         <1.0         <1.0         <1.0         <1.0           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM 05185m         >10         3.0         53         63           WEAR METALS         method         limit/base         current         history1         history2<			Ju	12022	Mar2023 Sep20	23	
Sample Date         Client Info         15 Sep 2023         19 Mar 2023         01 Jul 2022           Machine Age         mls         Client Info         0         157735         136298         89006           Oil Age         mls         Client Info         N/A         N/A         N/A         N/A           Oil Changed         Client Info         N/A         N/A         N/A         N/A         N/A           Sample Status         Image: Control of the Info         N/A         N/A         N/A         N/A         N/A           CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         S         <1.0	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age         mls         Client Info         157735         136298         89006           Oil Age         mls         Client Info         0         0         0         0           Oil Changed         Client Info         N/A         N/A         N/A         N/A           Sample Status         Image: Control of Mode         NEG         NCRMAL         NORMAL         NORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         NEG         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         30         53         63           Chromium         ppm         ASTM D5185m         >20         1         3         5           Nickel         ppm         ASTM D5185m         >4         0         <1         <1           Silver         ppm         ASTM D5185m         >20         7         10         17           Lead         ppm         ASTM D5185m         >30         1         3         6	Sample Number		Client Info		IL05967306	IL05802183	IL05597819
Oil Age         mls         Client Info         N/A	Sample Date		Client Info		15 Sep 2023	19 Mar 2023	01 Jul 2022
Oil Changed Status	Machine Age	mls	Client Info		157735	136298	89006
Sample Status	Oil Age	mls	Client Info		0	0	0
CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0	Oil Changed		Client Info		N/A	N/A	N/A
Fuel	Sample Status				ABNORMAL	NORMAL	NORMAL
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         30         53         63           Chromium         ppm         ASTM D5185m         >20         1         3         5           Nickel         ppm         ASTM D5185m         >4         0         <1         <1           Tittanium         ppm         ASTM D5185m         >3         0         0         <1           Silver         ppm         ASTM D5185m         >3         0         0         <1           Aluminum         ppm         ASTM D5185m         >3         0         0         <1           Lead         ppm         ASTM D5185m         >30         1         3         6           Copper         ppm         ASTM D5185m         >33         1         2         2           Vanadium         ppm         ASTM D5185m         >15         <1         1         2           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         25         25         25	CONTAMINATION	V	method	limit/base	current	history1	history2
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         30         53         63           Chromium         ppm         ASTM D5185m         >20         1         3         5           Nickel         ppm         ASTM D5185m         >20         1         -1         -1           Titanium         ppm         ASTM D5185m         >3         0         0         -1           Aluminum         ppm         ASTM D5185m         >3         0         0         -1           Aluminum         ppm         ASTM D5185m         >20         7         10         17           Lead         ppm         ASTM D5185m         >20         7         10         17           Lead         ppm         ASTM D5185m         >20         7         10         17           Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         0         0         0         0           Calmium         ppm         ASTM D5185m         0         0         0	Fuel		WC Method	>5	<1.0	<1.0	<1.0
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >20         1         3         5           Nickel         ppm         ASTM D5185m         >4         0         <1         <1           Titanium         ppm         ASTM D5185m         >4         0         <1         <1           Silver         ppm         ASTM D5185m         >3         0         0         <1           Aluminum         ppm         ASTM D5185m         >20         7         10         17           Lead         ppm         ASTM D5185m         >40         4         5         6           Copper         ppm         ASTM D5185m         >40         4         5         6           Copper         ppm         ASTM D5185m         >15         <1         1         2           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           Boron         ppm         ASTM D5185m         25         25         25         20           Barium         ppm         ASTM D5185m         0         2         0         0	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	30	53	63
Titanium	Chromium	ppm	ASTM D5185m	>20	1	3	5
Silver	Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Aluminum         ppm         ASTM D5185m         >20         7         10         17           Lead         ppm         ASTM D5185m         >40         4         5         6           Copper         ppm         ASTM D5185m         >40         4         5         6           Copper         ppm         ASTM D5185m         >330         1         3         6           Tin         ppm         ASTM D5185m         15         <1         1         2           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         25         25         20           Barium         ppm         ASTM D5185m         0         2         0           Molybdenum         ppm         ASTM D5185m         77         71         61           Manganesium         ppm         ASTM D5185m         538         638         745           Calcium         ppm <th>Titanium</th> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>&lt;1</th> <td>&lt;1</td> <td>&lt;1</td>	Titanium	ppm	ASTM D5185m		<1	<1	<1
Lead         ppm         ASTM D5185m         >40         4         5         6           Copper         ppm         ASTM D5185m         >330         1         3         6           Tin         ppm         ASTM D5185m         >15         <1         1         2           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         25         25         25         20           Barium         ppm         ASTM D5185m         0         2         0         0           Molybdenum         ppm         ASTM D5185m         77         71         61         61           Manganese         ppm         ASTM D5185m         538         638         745           Calcium         ppm         ASTM D5185m         1244         1336         1407           Phosphorus         ppm         ASTM D5185m         852         879         747	Silver	ppm	ASTM D5185m	>3	0	0	<1
Copper         ppm         ASTM D5185m         >330         1         3         6           Tin         ppm         ASTM D5185m         >15         <1	Aluminum	ppm	ASTM D5185m	>20	7	10	17
Tin	Lead	ppm	ASTM D5185m	>40	4	5	6
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         25         25         20           Barium         ppm         ASTM D5185m         0         2         0           Molybdenum         ppm         ASTM D5185m         77         71         61           Manganese         ppm         ASTM D5185m         538         638         745           Calcium         ppm         ASTM D5185m         538         638         745           Calcium         ppm         ASTM D5185m         852         879         747           Zinc         ppm         ASTM D5185m         1054         1072         940           Sulfur         ppm         ASTM D5185m         2848         2618         2798           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         25         7         10 <th>Copper</th> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;330</td> <th>1</th> <td>3</td> <td>6</td>	Copper	ppm	ASTM D5185m	>330	1	3	6
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         25         25         25         20           Barium         ppm         ASTM D5185m         0         2         0           Molybdenum         ppm         ASTM D5185m         77         71         61           Manganese         ppm         ASTM D5185m         <1         2         2           Magnesium         ppm         ASTM D5185m         538         638         745           Calcium         ppm         ASTM D5185m         1244         1336         1407           Phosphorus         ppm         ASTM D5185m         852         879         747           Zinc         ppm         ASTM D5185m         1054         1072         940           Sulfur         ppm         ASTM D5185m         2848         2618         2798           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25	Tin	ppm	ASTM D5185m	>15	<1	1	2
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         25         25         20           Barium         ppm         ASTM D5185m         0         2         0           Molybdenum         ppm         ASTM D5185m         77         71         61           Manganese         ppm         ASTM D5185m         538         638         745           Calcium         ppm         ASTM D5185m         538         638         745           Calcium         ppm         ASTM D5185m         1244         1336         1407           Phosphorus         ppm         ASTM D5185m         852         879         747           Zinc         ppm         ASTM D5185m         1054         1072         940           Sulfur         ppm         ASTM D5185m         2848         2618         2798           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         25         7         10         13           Sodium         ppm         ASTM D5185m         20	Vanadium	ppm	ASTM D5185m		0	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         2         0           Molybdenum         ppm         ASTM D5185m         77         71         61           Manganese         ppm         ASTM D5185m         <1							
Molybdenum         ppm         ASTM D5185m         77         71         61           Manganese         ppm         ASTM D5185m         <1	ADDITIVES		method	limit/base	current	history1	history2
Manganese         ppm         ASTM D5185m         <1         2         2           Magnesium         ppm         ASTM D5185m         538         638         745           Calcium         ppm         ASTM D5185m         1244         1336         1407           Phosphorus         ppm         ASTM D5185m         852         879         747           Zinc         ppm         ASTM D5185m         1054         1072         940           Sulfur         ppm         ASTM D5185m         2848         2618         2798           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         10         13           Sodium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7845         >30         27.9         27.9         28.8           FLUID DEGRADAT		ppm		limit/base			
Magnesium         ppm         ASTM D5185m         538         638         745           Calcium         ppm         ASTM D5185m         1244         1336         1407           Phosphorus         ppm         ASTM D5185m         852         879         747           Zinc         ppm         ASTM D5185m         1054         1072         940           Sulfur         ppm         ASTM D5185m         2848         2618         2798           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         10         13           Sodium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8	Boron		ASTM D5185m	limit/base	25	25	20
Calcium         ppm         ASTM D5185m         1244         1336         1407           Phosphorus         ppm         ASTM D5185m         852         879         747           Zinc         ppm         ASTM D5185m         1054         1072         940           Sulfur         ppm         ASTM D5185m         2848         2618         2798           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         10         13           Sodium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         h	Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	25 0	25 2	20
Phosphorus         ppm         ASTM D5185m         852         879         747           Zinc         ppm         ASTM D5185m         1054         1072         940           Sulfur         ppm         ASTM D5185m         2848         2618         2798           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         10         13           Sodium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         2	Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	25 0 77	25 2 71	20 0 61
Zinc         ppm         ASTM D5185m         1054         1072         940           Sulfur         ppm         ASTM D5185m         2848         2618         2798           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         10         13           Sodium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	25 0 77 <1	25 2 71 2	20 0 61 2
Sulfur         ppm         ASTM D5185m         2848         2618         2798           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         10         13           Sodium         ppm         ASTM D5185m         >20         10         28         44           Potassium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	25 0 77 <1 538	25 2 71 2 638	20 0 61 2 745
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         10         13           Sodium         ppm         ASTM D5185m         1         3         4           Potassium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	25 0 77 <1 538 1244 852	25 2 71 2 638 1336	20 0 61 2 745 1407
Silicon         ppm         ASTM D5185m         >25         7         10         13           Sodium         ppm         ASTM D5185m         1         3         4           Potassium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	25 0 77 <1 538 1244 852	25 2 71 2 638 1336 879	20 0 61 2 745 1407 747
Sodium         ppm         ASTM D5185m         1         3         4           Potassium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	25 0 77 <1 538 1244 852 1054	25 2 71 2 638 1336 879 1072	20 0 61 2 745 1407 747 940
Potassium         ppm         ASTM D5185m         >20         10         28         44           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		25 0 77 <1 538 1244 852 1054 2848	25 2 71 2 638 1336 879 1072 2618	20 0 61 2 745 1407 747 940 2798
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	25 0 77 <1 538 1244 852 1054 2848	25 2 71 2 638 1336 879 1072 2618 history1	20 0 61 2 745 1407 747 940 2798 history2
Soot %         %         *ASTM D7844 >3         0.4         0.7         0.7           Nitration         Abs/cm         *ASTM D7624 >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415 >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25	25 0 77 <1 538 1244 852 1054 2848 current 7	25 2 71 2 638 1336 879 1072 2618 history1	20 0 61 2 745 1407 747 940 2798 history2
Nitration         Abs/cm         *ASTM D7624         >20         11.4         12.3         14.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25	25 0 77 <1 538 1244 852 1054 2848 current 7	25 2 71 2 638 1336 879 1072 2618 history1	20 0 61 2 745 1407 747 940 2798 history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         27.9         27.9         28.8           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         26.9         26.4         29.2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20	25 0 77 <1 538 1244 852 1054 2848 current 7 1	25 2 71 2 638 1336 879 1072 2618 history1 10 3 28	20 0 61 2 745 1407 747 940 2798 history2 13 4
FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     26.9     26.4     29.2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20 limit/base	25 0 77 <1 538 1244 852 1054 2848 current 7 1 10	25 2 71 2 638 1336 879 1072 2618 history1 10 3 28	20 0 61 2 745 1407 747 940 2798 history2 13 4 44
Oxidation Abs/.1mm *ASTM D7414 >25 <b>26.9</b> 26.4 29.2	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	25 0 77 <1 538 1244 852 1054 2848 current 7 1 10 current 0.4	25 2 71 2 638 1336 879 1072 2618 history1 10 3 28 history1 0.7	20 0 61 2 745 1407 747 940 2798 history2 13 4 44 history2 0.7
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	25 0 77 <1 538 1244 852 1054 2848 current 7 1 10 current 0.4 11.4	25 2 71 2 638 1336 879 1072 2618 history1 10 3 28 history1 0.7 12.3	20 0 61 2 745 1407 747 940 2798 history2 13 4 44 history2 0.7 14.9
Base Number (BN) mg KOH/g ASTM D2896	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method  *ASTM D5185m ASTM D7844  *ASTM D7624  *ASTM D76145	limit/base	25 0 77 <1 538 1244 852 1054 2848 current 7 1 10 current 0.4 11.4 27.9	25 2 71 2 638 1336 879 1072 2618 history1 10 3 28 history1 0.7 12.3 27.9	20 0 61 2 745 1407 747 940 2798 history2 13 4 44 history2 0.7 14.9 28.8
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method  *ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  Method  *ASTM D7844  *ASTM D7844  *ASTM D7624  *ASTM D7415  Method	limit/base >25 >20 limit/base >3 >20 >30 limit/base	25 0 77 <1 538 1244 852 1054 2848 current 7 1 10 current 0.4 11.4 27.9 current	25 2 71 2 638 1336 879 1072 2618 history1 10 3 28 history1 0.7 12.3 27.9 history1	20 0 61 2 745 1407 747 940 2798 history2 13 4 44 history2 0.7 14.9 28.8 history2



# **OIL ANALYSIS REPORT**

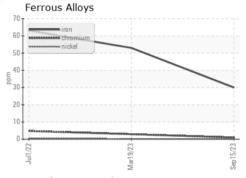


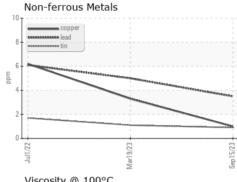
Viscosity @ :	100°C	
18 17 <b>Abnormal</b>		
16+		
(2-001)		
13 Abnormal		
12-		
Jul1/22 +	Mar19/23	

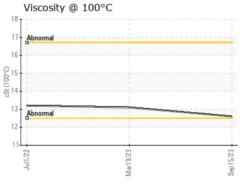
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

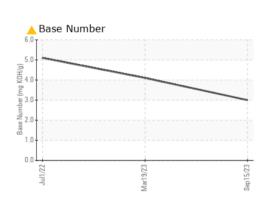
I LOID I NOI LI	TILO	memou	IIIIIII Dase	Current	HISTOLAL	HISTORYZ
Visc @ 100°C	cSt	ASTM D445		12.6	13.1	13.2

## **GRAPHS**













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10673857

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 05967306

: IL05967306

Received Diagnosed Diagnostician : Don Baldridge

: 03 Oct 2023 : 04 Oct 2023

Test Package : FLEET

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)

TAMPA IDEALEASE 5951 ORIENT ROAD

TAMPA, FL US 33610-9565 Contact: Russ Cook

russcook@idealease.com

T: (813)626-9285 F: (844)270-1356