

# **OIL ANALYSIS REPORT**

#### Sample Rating Trend



#### Area TRACTORS Machine Id [TRACTORS] TR375 Component

Diesel Engine

# KENDALL 15W40 (--- 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.

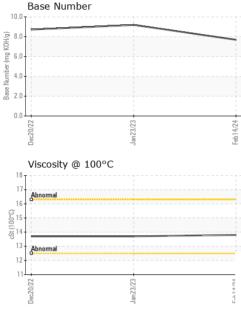
### Fluid Condition

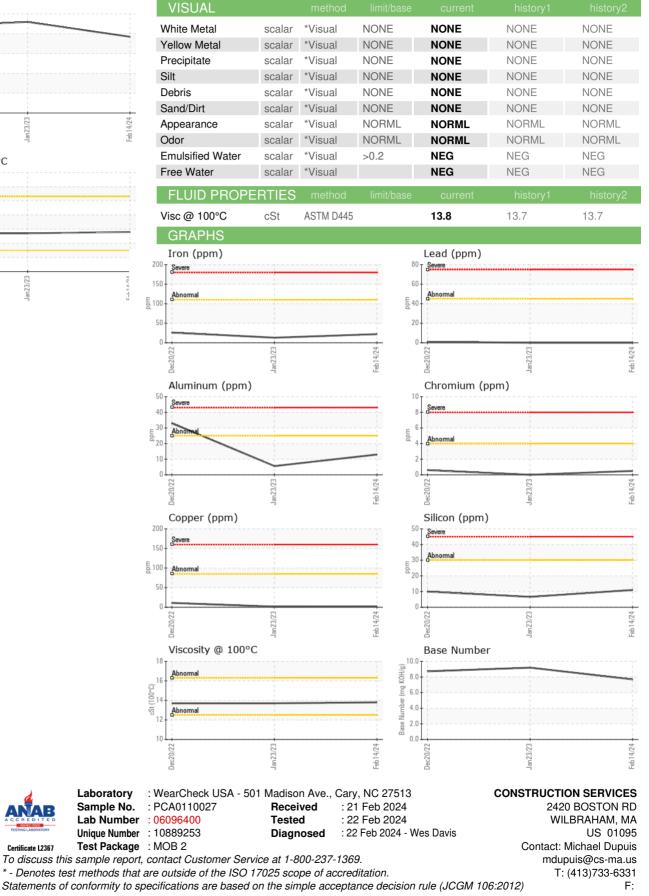
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110027	WC0721404	WC0721400
Sample Date		Client Info		14 Feb 2024	23 Jan 2023	20 Dec 2022
Machine Age	hrs	Client Info		3435	1697	1738
Oil Age	hrs	Client Info		600	100	600
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	22	13	26
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		1	1	1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	13	6	<b>A</b> 33
Lead	ppm	ASTM D5185m	>45	0	0	<1
Copper	ppm	ASTM D5185m	>85	2	2	11
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
Caumum	ррпі	ASTIM DS105III		U	0	0
ADDITIVES	ppm	method	limit/base	current	0 history1	history2
	ppm		limit/base 6.3	-	-	-
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	6.3	current 19	history1 43	history2 9
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	6.3 0.6	current 19 <1	history1 43 0	history2 9 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	6.3 0.6	current 19 <1 82	history1 43 0 69	history2 9 0 56
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	6.3 0.6 0.4	current 19 <1 82 <1	history1 43 0 69 <1	history2 9 0 56 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	6.3 0.6 0.4 277	current 19 <1 82 <1 132	history1 43 0 69 <1 469 1532 966	history2 9 0 56 <1 904 1140 1015
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	6.3 0.6 0.4 277 1514 634 743	current           19           <1           82           <1           132           1950	history1 43 0 69 <1 469 1532	history2 9 0 56 <1 904 1140
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	6.3 0.6 0.4 277 1514 634	current           19           <1           82           <1           132           1950           1026	history1 43 0 69 <1 469 1532 966	history2 9 0 56 <1 904 1140 1015
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	6.3 0.6 0.4 277 1514 634 743	Current 19 <1 82 <1 132 1950 1026 1115	history1           43           0           69           <1           469           1532           966           1135           3076           history1	history2 9 0 56 <1 904 1140 1015 1207
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	6.3 0.6 0.4 277 1514 634 743 2592	Current 19 <1 82 <1 132 1950 1026 1115 3742	history1           43           0           69           <1           469           1532           966           1135           3076	history2           9           0           56           <1           904           1140           1015           1207           3157           history2           10
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	6.3 0.6 0.4 2777 1514 634 743 2592 limit/base	Current 19 <1 82 <1 132 1950 1026 1115 3742 Current	history1           43           0           69           <1           469           1532           966           1135           3076           history1           7           3	history2           9           0           56           <1           904           1140           1015           1207           3157           history2           10           12
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	6.3 0.6 0.4 2777 1514 634 743 2592 limit/base	current           19           <1           82           <1           132           1950           1026           1115           3742           current           11	history1           43           0           69           <1           469           1532           966           1135           3076           history1           7	history2           9           0           56           <1           904           1140           1015           1207           3157           history2           10
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	method           ASTM D5185m	6.3 0.6 0.4 277 1514 634 743 2592 limit/base >30	current         19         <1         82         <1         132         1950         1026         1115         3742         current         11         0         29         current	history1         43         0         69         <1         469         1532         966         1135         3076         history1         7         3         14	history2         9         0         56         <1         904         1140         1015         1207         3157         history2         10         12         76         history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	method           ASTM D5185m	6.3 0.6 0.4 277 1514 634 743 2592 limit/base >30	current           19           <1           82           <1           132           1950           1026           1115           3742           current           11           0           29	history1         43         0         69         <1         469         1532         966         1135         3076         history1         7         3         14         history1         0.1	history2         9         0         56         <1         904         1140         1015         1207         3157         history2         10         12         76
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	6.3 0.6 0.4 277 1514 634 743 2592 limit/base >30 >20 limit/base	current         19         <1         82         <1         132         1950         1026         1115         3742         current         11         0         29         current	history1         43         0         69         <1         469         1532         966         1135         3076         history1         7         3         14	history2         9         0         56         <1         904         1140         1015         1207         3157         history2         10         12         76         history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	6.3 0.6 0.4 277 1514 634 743 2592 limit/base >30 >20 limit/base >33	current           19           <1           82           <1           132           1950           1026           1115           3742           current           11           0           29           current           0.3	history1         43         0         69         <1         469         1532         966         1135         3076         history1         7         3         14         history1         0.1	history2         9         0         56         <1         904         1140         1015         1207         3157         history2         10         12         76         history2         0.3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm t ppm ppm	method           ASTM D5185m           ASTM D5185m	6.3 0.6 0.4 277 1514 634 743 2592 limit/base >30 2592 limit/base >30	current           19           <1           82           <1           132           1950           1026           1115           3742           current           11           0           29           current           0.3           10.5	history1           43           0           69           <1           469           1532           966           1135           3076           history1           7           3           14           history1           0.1           6.9	history2         9         0         56         <1         904         1140         1015         1207         3157         history2         10         12         76         history2         0.3         10.5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm t ppm ppm	method           ASTM D5185m           ASTM D5185m	6.3 0.6 0.4 277 1514 634 743 2592 <b>Imit/base</b> >30 20 <b>Imit/base</b> >3 >20 >3	current         19         <1         82         <1         132         1950         1026         1115         3742         current         11         0         29         current         0.3         10.5         22.0	history1         43         0         69         <1         469         1532         966         1135         3076         history1         7         3         14         history1         0.1         6.9         17.5	history2         9         0         56         <1         904         1140         1015         1207         3157         history2         10         12         76         history2         0.3         10.5         22.2



# **OIL ANALYSIS REPORT**





Certificate L2367