



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**MORBARK 1300B 572-1531**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 30 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0204704</b>	JR0157948	JR0157947
Sample Date		Client Info		<b>23 Apr 2024</b>	16 Feb 2023	15 Feb 2023
Machine Age	hrs	Client Info		<b>3888</b>	3603	3603
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>32</b>	19	11
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	2	<1
Copper	ppm	ASTM D5185m	>330	<b>6</b>	2	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

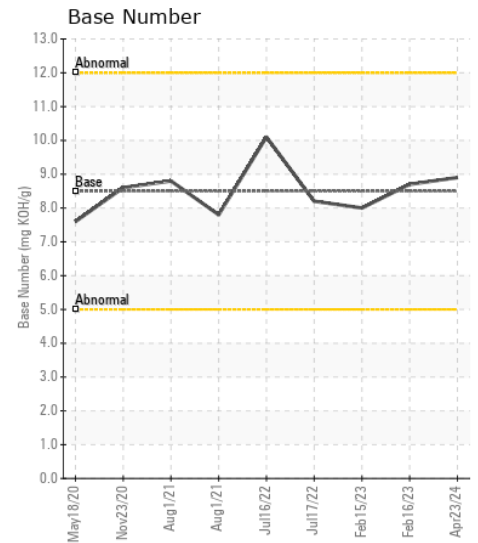
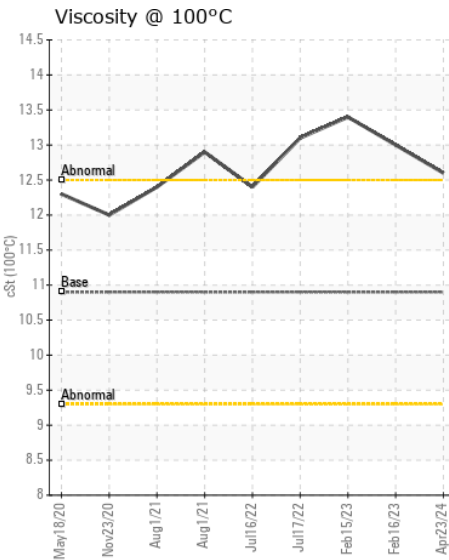
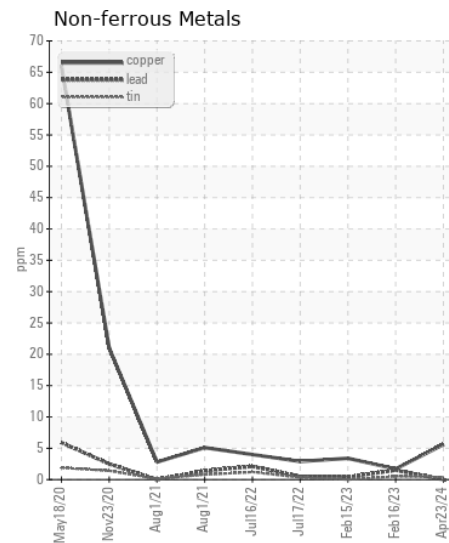
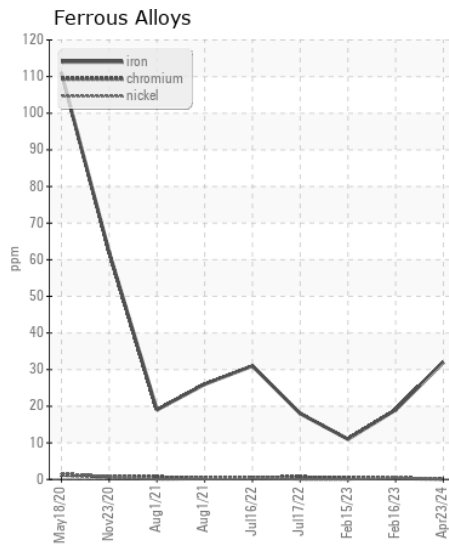
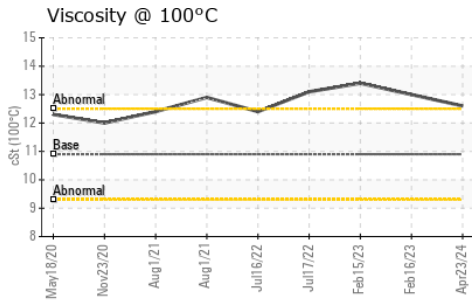
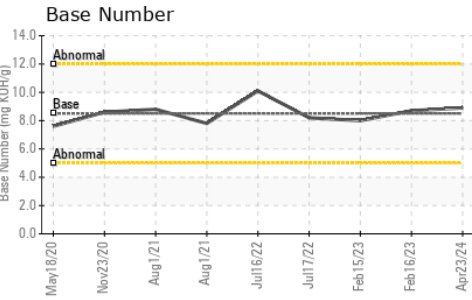
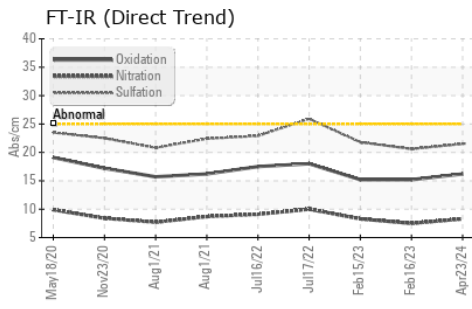
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.3	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	7.5	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.5</b>	20.6	21.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### 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.

Sodium	ppm	ASTM D5185m	>75	<b>&lt;1</b>	1	1
Boron	ppm	ASTM D5185m	250	<b>249</b>	266	226
Barium	ppm	ASTM D5185m	10	<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185m	100	<b>250</b>	243	236
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>832</b>	775	752
Calcium	ppm	ASTM D5185m	3000	<b>1438</b>	1401	1382
Phosphorus	ppm	ASTM D5185m	1150	<b>892</b>	833	843
Zinc	ppm	ASTM D5185m	1350	<b>1060</b>	1042	1081
Sulfur	ppm	ASTM D5185m	4250	<b>3231</b>	3436	3432
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.2</b>	15.2	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.9</b>	8.7	8.0
Visc @ 100°C	cSt	ASTM D445	10.9	<b>12.6</b>	13.0	13.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0204704 **Received** : 24 Apr 2024  
**Lab Number** : 06158891 **Tested** : 25 Apr 2024  
**Unique Number** : 10994314 **Diagnosed** : 26 Apr 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: TBN )

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)

**JRE - GREENSBORO**  
 411 SOUTH REGIONAL ROAD  
 GREENSBORO, NC  
 US 27409  
 Contact: NICK GALLAHER  
 NGALLAHER@JRENET.COM  
 T: (336)668-2762  
 F: (336)665-9556