

# **OIL ANALYSIS REPORT**

# Area **RING CONTAINER EXTRUDER K - MAIN PLANT**

Hydraulic Power Pack SHELL TELLUS 46 (--- GAL)

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

#### Wear

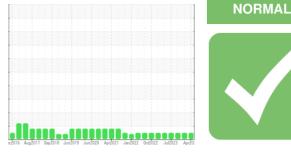
All component wear rates are normal.

#### Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

## Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



Sample Rating Trend

Sample Date     Info     02 Apr 2024     25 Jan 2024     18 Oct 2023       Machine Age     hrs     Client Info     0     0     0       Oil Age     hrs     Client Info     0     0     0       Oil Changed     Client Info     Not Changd     NorMAL     NorMAL     NorMAL       Sample Status     Imit/base     current     history1     history2       Water     WC Method     >0.05     NEG     NEG     NEG       WEAR METALS     method     imit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     0     0     <1							
Sample Date     Client Info     02 Apr 2024     25 Jan 2024     18 Oct 2023       Machine Age     hrs     Client Info     0     0     0       Oil Age     hrs     Client Info     0     0     0       Oil Changed     Client Info     Not Changd     Not Changd     Not Changd     Nor MAL     Nor MAL       CONTAMINATION     method     imit/base     current     history1     history2       Water     WC Method     >0.05     NEG     NEG     NEG       WEAR METALS     method     imit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     0     0     <1	SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Machine Age     hrs     Client Info     0     0     0       Oil Age     hrs     Client Info     Not Changd     Not Changd     Not Changd       Sample Status     Image     Client Info     Not Changd     Not Changd     Nor MAL       CONTAMINATION     method     Imit/base     current     History1     History2       Water     WC Method     >0.0.5     NEG     NEG     NEG       WEAR METALS     method     imit/base     current     History1     History2       Iron     ppm     ASTM D5185m     >20     0     0     -1       Nickel     ppm     ASTM D5185m     >20     0     0     -1       Silver     ppm     ASTM D5185m     >20     0     0     -1       Copper     ppm     ASTM D5185m     >20     0     -1     0     -1       Cadmium     ppm     ASTM D5185m     >20     0     -1     0     -1       ASTM D5185m     >20     0     0     -1	Sample Number		Client Info		WC0892744	WC0891200	WC0855536
Oil Age hrs Client Info 0 0 0   Oil Changed Client Info Not Changd Not Changd Not Changd   Sample Status Imit base Imit base Imit base Nor Anagd   CONTAMINATION method Imit base Imit base Imit base   Water WC Method >0.05 NEG NEG NEG   WEAR METALS method Imit base Imit base Imit base Imit base   Chromium ppm ASTM D5185m >20 2 2 12   Chromium ppm ASTM D5185m >20 0 0 <1   Nickel ppm ASTM D5185m >20 0 0 <1   Aluminum ppm ASTM D5185m >20 0 0 <1   Lead ppm ASTM D5185m >20 3 4 11   Tin ppm ASTM D5185m >20 3 4 11   Chromium ppm ASTM D5185m >20 3 4 11   Cadmium ppm ASTM D5185m >20 3 4 11   Copper ppm ASTM D5185m >20 3 4	Sample Date		Client Info		02 Apr 2024	25 Jan 2024	18 Oct 2023
Oil Changed Client Info Not Changd Not Changd Not Changd   Sample Status Client Info Not Changd Not Changd Not Changd   CONTAMINATION method Imit/base current history1 history2   Water WC Method >0.05 NEG NEG NEG   WEAR METALS method imit/base current history1 history2   Iron ppm ASTM D585m >20 Q Q <10	Machine Age	hrs	Client Info			0	0
Sample Status     NORMAL     NORMAL     NORMAL     NORMAL       CONTAMINATION     method     limit/base     current     history1     history2       Water     WC Method     >0.05     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     Q     O     o     ctrain       Nickel     ppm     ASTM D5185m     >20     Q     O     o     O       Astm D5185m     0     0     0     0     0     0     0       Aluminum     ppm     ASTM D5185m     >20     C1     0     -11       Lead     ppm     ASTM D5185m     >20     G     0     0     -11       Vanadium     ppm     ASTM D5185m     >20     C1     0     -11       Copper     ppm     ASTM D5185m     0     0     0     0     0       Addium     ppm     ASTM D5185m <t< th=""><th>Oil Age</th><th>hrs</th><th>Client Info</th><th></th><th>0</th><th>0</th><th>0</th></t<>	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION     method     limit/base     current     history1     history2       Water     WC Method     >0.05     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     2     2     12       Chromium     ppm     ASTM D5185m     >20     0     0     <1       Nickel     ppm     ASTM D5185m     >20     0     0     0       Aluminum     ppm     ASTM D5185m     >20     <1     0     <1       Lead     ppm     ASTM D5185m     >20     <1     0     <1       Cadmium     ppm     ASTM D5185m     >20     <1     0     <1       Cadmium     ppm     ASTM D5185m     >20     <1     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     <1       ADDITVES     method     limit/base     current     history1     hi	Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Water     WC Method     >0.05     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     2     2     12       Chromium     ppm     ASTM D5185m     >20     0     0     <1       Nickel     ppm     ASTM D5185m     >20     0     0     0       Aluminum     ppm     ASTM D5185m     >20     0     0     <1       Lead     ppm     ASTM D5185m     >20     <1     0     <1       Lead     ppm     ASTM D5185m     >20     3     4     11       Tin     ppm     ASTM D5185m     >20     <1     0     0       Vanadium     ppm     ASTM D5185m     >20     <1     0     0     <1       Vanadium     ppm     ASTM D5185m     0     0     0     <1     0       Copper     ppm     ASTM D5185m     0     0	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     2     2     12       Chromium     ppm     ASTM D5185m     >20     0     0     <1       Nickel     ppm     ASTM D5185m     >20     0     0     0       Titanium     ppm     ASTM D5185m     0     0     0     0       Silver     ppm     ASTM D5185m     >20     0     0     <1       Lead     ppm     ASTM D5185m     >20     0     0     <1       Copper     ppm     ASTM D5185m     >20     3     4     11       Tin     ppm     ASTM D5185m     >20     3     4     11       Vanadium     ppm     ASTM D5185m     >20     3     4     11       Tin     ppm     ASTM D5185m     0     0     0     <1       Admium     ppm     ASTM D5185m     0     0     0     <1 <th>CONTAMINATION</th> <th>N</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	CONTAMINATION	N	method	limit/base	current	history1	history2
Iron     ppm     ASTM D5185m     >20     2     2     12       Chromium     ppm     ASTM D5185m     >20     0     0     <1       Nickel     ppm     ASTM D5185m     >20     0     0     0       Silver     ppm     ASTM D5185m     0     0     0     0       Aluminum     ppm     ASTM D5185m     >20     0     0     <1     0       Aduminum     ppm     ASTM D5185m     >20     0     0     <1     1       Lead     ppm     ASTM D5185m     >20     3     4     11     1       Tin     ppm     ASTM D5185m     >20     <1     0     <1     0       Cadmium     ppm     ASTM D5185m     0     0     0     <1     1       ADDITIVES     method     limit/base     current     history1     history2       Barium     ppm     ASTM D5185m     0.0     0     <1     1       Magnaesee     ppm	Water		WC Method	>0.05	NEG	NEG	NEG
Chromium     ppm     ASTM D5185m     >20     0     0     <1	WEAR METALS		method	limit/base	current	history1	history2
Chromium     ppm     ASTM D5185m     >20     0     0     <1	Iron	ppm	ASTM D5185m	>20	2	2	12
Nickel     ppm     ASTM D5185m     >20     0     0     0       Titanium     ppm     ASTM D5185m     0     <1     0       Silver     ppm     ASTM D5185m     0     0     0       Aluminum     ppm     ASTM D5185m     >20     <1     0     <1       Lead     ppm     ASTM D5185m     >20     3     4     11       Tin     ppm     ASTM D5185m     >20     3     4     11       Tin     ppm     ASTM D5185m     >20     <1     0     <1       Vanadium     ppm     ASTM D5185m     >20     <1     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0     0       Boron     ppm     ASTM D5185m     0     140     145     120       Magnaese     ppm     ASTM D5185m     0     140     0     0       Magnesium     ppm     ASTM D5185m     11     0     0     <1	Chromium		ASTM D5185m	>20	0	0	<1
Titanium     ppm     ASTM D5185m     0     <1	Nickel				0	0	0
Silver     ppm     ASTM D5185m     0     0     0       Aluminum     ppm     ASTM D5185m     >20     <1	Titanium		ASTM D5185m		0	<1	0
Lead     ppm     ASTM D5185m     >20     0     0     <1	Silver	ppm	ASTM D5185m		0	0	0
Lead     ppm     ASTM D5185m     >20     0     0     <1	Aluminum		ASTM D5185m	>20	<1	0	<1
Tin     ppm     ASTM D5185m     >20     <1	Lead	ppm	ASTM D5185m	>20	0	0	<1
Vanadium     ppm     ASTM D5185m     <1	Copper	ppm	ASTM D5185m	>20	3	4	11
Cadmium     ppm     ASTM D5185m     0     0     <1	Tin	ppm	ASTM D5185m	>20	<1	0	<1
CadmiumppmASTM D5185m00<1	Vanadium	ppm	ASTM D5185m		<1	0	0
Boron     ppm     ASTM D5185m     0.0     0     0     0     0       Barium     ppm     ASTM D5185m     0     0     0     <1       Molybdenum     ppm     ASTM D5185m     0     140     145     120       Manganese     ppm     ASTM D5185m     0     140     145     120       Magnesium     ppm     ASTM D5185m     0     140     0     0     <1       Calcium     ppm     ASTM D5185m     11     0     0     <1     0     <1       Calcium     ppm     ASTM D5185m     35     47     37     40       Phosphorus     ppm     ASTM D5185m     266     445     441     344       Zinc     ppm     ASTM D5185m     1847     1976     1610     2040       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2     2     4  Sodium     ppm <th>Cadmium</th> <th></th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th>0</th> <th>&lt;1</th>	Cadmium		ASTM D5185m		0	0	<1
Barium     ppm     ASTM D5185m     0     0     0     0         Molybdenum     ppm     ASTM D5185m     0     140     145     120       Manganese     ppm     ASTM D5185m     0     140     145     120       Magnesium     ppm     ASTM D5185m     11     0     0     <1       Calcium     ppm     ASTM D5185m     35     47     37     40       Phosphorus     ppm     ASTM D5185m     266     445     441     344       Zinc     ppm     ASTM D5185m     276     418     403     302       Sulfur     ppm     ASTM D5185m     1847     1976     1610     2040       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >20     0     0     1       Potassium     ppm     ASTM D							
Molybdenum     ppm     ASTM D5185m     0     140     145     120       Manganese     ppm     ASTM D5185m      <1	ADDITIVES		method	limit/base	current	history1	history2
Manganese     ppm     ASTM D5185m     <1	ADDITIVES Boron	ppm					
Magnesium     ppm     ASTM D5185m     11     0     0     <1			ASTM D5185m	0.0	0	0	0
Calcium     ppm     ASTM D5185m     35     47     37     40       Phosphorus     ppm     ASTM D5185m     266     445     441     344       Zinc     ppm     ASTM D5185m     266     445     441     344       Zinc     ppm     ASTM D5185m     276     418     403     302       Sulfur     ppm     ASTM D5185m     1847     1976     1610     2040       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >20     0     0     1       Potassium     ppm     ASTM D5185m     >20     0     0     1       Particles >4µm     ASTM D7647     >5000     737     752     1247       Particles >6µm     ASTM D7647     >100     14     30<	Boron Barium	ppm	ASTM D5185m ASTM D5185m	0.0 0	0 0	0	0 <1
Phosphorus     ppm     ASTM D5185m     266     445     441     344       Zinc     ppm     ASTM D5185m     276     418     403     302       Sulfur     ppm     ASTM D5185m     276     418     403     302       Sulfur     ppm     ASTM D5185m     1847     1976     1610     2040       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >20     0     0     1       Potassium     ppm     ASTM D5185m     >20     0     0     1       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >5000     737     752     1247       Particles >4µm     ASTM D7647     >160     11	Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0	0 0 140	0 0 145	0 <1 120
Zinc     ppm     ASTM D5185m     276     418     403     302       Sulfur     ppm     ASTM D5185m     1847     1976     1610     2040       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >20     0     0     1       Potassium     ppm     ASTM D5185m     >20     0     0     1       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >5000     737     752     1247       Particles >6µm     ASTM D7647     >1300     122     151     362       Particles >14µm     ASTM D7647     40     3     4     <	Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0	0 0 140 <1	0 0 145 0	0 <1 120 0
Sulfur     ppm     ASTM D5185m     1847     1976     1610     2040       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >15     2     2     4       Potassium     ppm     ASTM D5185m     >20     0     0     1       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >5000     737     752     1247       Particles >6µm     ASTM D7647     >160     11     14     30       Particles >14µm     ASTM D7647     >160     11     14     30       Particles >21µm     ASTM D7647     >10     0     0     1       Particles >38µm     ASTM D7647     >3     0     0     0	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11	0 0 140 <1 0	0 0 145 0 0	0 <1 120 0 <1
CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >15     2     2     4       Potassium     ppm     ASTM D5185m     >20     0     0     1       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >5000     737     752     1247       Particles >6µm     ASTM D7647     >1300     122     151     362       Particles >6µm     ASTM D7647     >160     11     14     30       Particles >14µm     ASTM D7647     >40     3     4     7       Particles >38µm     ASTM D7647     >10     0     0     1       Particles >71µm     ASTM D7647     >3     0     0     0	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11 35	0 0 140 <1 0 47	0 0 145 0 0 37	0 <1 120 0 <1 40
Silicon     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >15     2     2     4       Sodium     ppm     ASTM D5185m     >15     2     2     4       Potassium     ppm     ASTM D5185m     >20     0     0     1       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >5000     737     752     1247       Particles >6µm     ASTM D7647     >1300     122     151     362       Particles >14µm     ASTM D7647     >160     11     14     30       Particles >21µm     ASTM D7647     >10     0     0     1       Particles >38µm     ASTM D7647     >3     0     0     0	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 11 35 266	0 0 140 <1 0 47 445	0 0 145 0 0 37 441	0 <1 120 0 <1 40 344
Sodium     ppm     ASTM D5185m     <1	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 ASTM D5185m	0.0 0 11 35 266 276	0 0 140 <1 0 47 445 418	0 0 145 0 0 37 441 403	0 <1 120 0 <1 40 344 302
Potassium     ppm     ASTM D5185m     >20     0     0     1       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >5000     737     752     1247       Particles >6µm     ASTM D7647     >1300     122     151     362       Particles >14µm     ASTM D7647     >160     11     14     30       Particles >21µm     ASTM D7647     >40     3     4     7       Particles >38µm     ASTM D7647     >10     0     0     1       Particles >71µm     ASTM D7647     >3     0     0     0	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	0.0 0 11 35 266 276 1847	0 0 140 <1 0 47 445 418 1976	0 0 145 0 0 37 441 403 1610	0 <1 120 0 <1 40 344 302 2040
Potassium     ppm     ASTM D5185m     >20     0     0     1       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >5000     737     752     1247       Particles >6µm     ASTM D7647     >1300     122     151     362       Particles >14µm     ASTM D7647     >160     11     14     30       Particles >21µm     ASTM D7647     >40     3     4     7       Particles >38µm     ASTM D7647     >10     0     0     1       Particles >71µm     ASTM D7647     >3     0     0     0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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 <b>Method</b>	0.0 0 11 35 266 276 1847 Limit/base	0 0 140 <1 0 47 445 418 1976 current	0 0 145 0 0 37 441 403 1610 history1	0 <1 120 0 <1 40 344 302 2040 history2
Particles >4μm     ASTM D7647     >5000 <b>737</b> 752     1247       Particles >6μm     ASTM D7647     >1300 <b>122</b> 151     362       Particles >14μm     ASTM D7647     >160 <b>11</b> 14     30       Particles >14μm     ASTM D7647     >40 <b>3</b> 4     7       Particles >21μm     ASTM D7647     >10 <b>0</b> 0     1       Particles >38μm     ASTM D7647     >3 <b>0</b> 0     0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0.0 0 11 35 266 276 1847 Limit/base	0 0 140 <1 0 47 445 418 1976 current 2	0 0 145 0 0 37 441 403 1610 history1 2	0 <1 120 0 <1 40 344 302 2040 history2 4
Particles >6μm     ASTM D7647     >1300     122     151     362       Particles >14μm     ASTM D7647     >160     11     14     30       Particles >21μm     ASTM D7647     >40     3     4     7       Particles >38μm     ASTM D7647     >10     0     0     1       Particles >71μm     ASTM D7647     >3     0     0     0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	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 <b>method</b> ASTM D5185m ASTM D5185m	0.0 0 11 35 266 276 1847 Limit/base	0 0 140 <1 0 47 445 418 1976 <u>current</u> 2 <1	0 0 145 0 0 37 441 403 1610 history1 2 0	0 <1 120 0 <1 40 344 302 2040 history2 4 1
Particles >14μm     ASTM D7647     >160     11     14     30       Particles >21μm     ASTM D7647     >40     3     4     7       Particles >38μm     ASTM D7647     >10     0     0     1       Particles >71μm     ASTM D7647     >3     0     0     0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0.0 0 11 35 266 276 1847 <b>limit/base</b> >15	0 0 140 <1 0 47 445 418 1976 current 2 2 <1 0	0 0 145 0 0 37 441 403 1610 history1 2 0 0 0	0 <1 120 0 <1 40 344 302 2040 history2 4 1 1
Particles >21μm     ASTM D7647     >40     3     4     7       Particles >38μm     ASTM D7647     >10     0     0     1       Particles >71μm     ASTM D7647     >3     0     0     0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0.0 0 11 35 266 276 1847 <b>limit/base</b> >15 >20 <b>limit/base</b>	0 0 140 <1 0 47 445 418 1976 <u>current</u> 2 <1 0	0 0 145 0 0 37 441 403 1610 <b>history1</b> 2 0 0 0 0	0 <1 120 0 <1 40 344 302 2040 history2 4 1 1 1 1 history2
Particles >38μm     ASTM D7647     >10     0     0     1       Particles >71μm     ASTM D7647     >3     0     0     0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0.0 0 11 35 266 276 1847 <b>Iimit/base</b> >15 >20 <b>Iimit/base</b> >5000	0 0 140 <1 0 47 445 418 1976 <u>current</u> 2 <1 0 <u>current</u>	0 0 145 0 0 37 441 403 1610 history1 2 0 0 0 0 history1 752	0 <1 120 0 <1 40 344 302 2040 history2 4 1 1 1 1 history2 1247
Particles >71μm     ASTM D7647     >3     0     0     0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0.0 0 11 35 266 276 1847 <b>limit/base</b> >15 >20 <b>limit/base</b> >5000 >1300	0 0 140 <1 0 47 445 418 1976 <u>current</u> 2 <1 0 <u>current</u> 737 122	0 0 145 0 0 37 441 403 1610 history1 2 0 0 0 history1 752 151	0 <1 120 0 <1 40 344 302 2040 history2 4 1 1 1 history2 1247 362
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0.0 0 11 35 266 276 1847 <b>Imit/base</b> >15 >20 <b>Imit/base</b> >5000 >1300 >160	0 0 140 <1 0 47 445 418 1976 current 2 <1 0 current 737 122 11	0 0 145 0 0 37 441 403 1610 history1 2 0 0 0 0 history1 752 151 14	0 <1 120 0 <1 40 344 302 2040 history2 4 1 1 1 history2 1247 362 30
Oil Cleanliness     ISO 4406 (c)     >19/17/14     17/14/11     17/14/11     17/16/12	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.0 0 11 35 266 276 1847 <b>limit/base</b> >15 >20 <b>limit/base</b> >5000 >1300 >160 >40	0 0 140 <1 0 47 445 418 1976 Current 2 <1 0 Current 737 122 11 3	0 0 145 0 0 37 441 403 1610 history1 2 0 0 0 V history1 752 151 14 4	0 <1 120 0 <1 40 344 302 2040 history2 4 1 1 1 history2 1247 362 30 7
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.0 0 11 35 266 276 1847 <b>limit/base</b> >15 >20 <b>limit/base</b> >5000 >1300 >160 >40 >10	0 0 140 <1 0 47 445 418 1976 <u>current</u> 2 <1 0 <u>current</u> 737 122 11 3 0	0 0 145 0 0 37 441 403 1610 history1 2 0 0 0 history1 752 151 151 14 4 0 0	0 <1 120 0 <1 40 344 302 2040 history2 4 1 1 1 history2 1247 362 30 7 1

mg KOH/g ASTM D8045 0.36

0.53

0.510 0.52

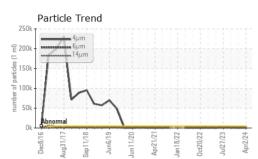
Report Id: MOTYOR [WUSCAR] 06143010 (Generated: 04/11/2024 20:21:34) Rev: 1

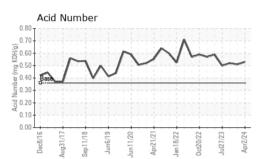
Submitted By: Bill Trimmer

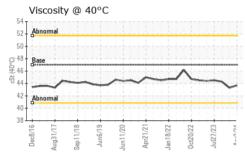
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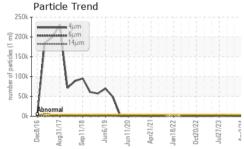


# **OIL ANALYSIS REPORT**

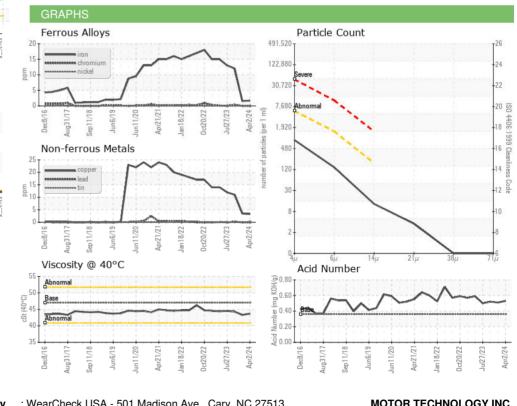








VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.99	43.7	43.3	44.3
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						
Bottom						



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MOTOR TECHNOLOGY INC Sample No. : WC0892744 Received : 09 Apr 2024 515 WILLOW SPRINGS LN Lab Number : 06143010 Tested : 10 Apr 2024 YORK, PA Unique Number : 10967818 Diagnosed : 11 Apr 2024 - Jonathan Hester US 17406 Test Package : IND 2 Contact: Bill Trimmer Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. btrimmer@motortechnologyinc.com T: (717)266-4045

\* - 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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Submitted By: Bill Trimmer

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