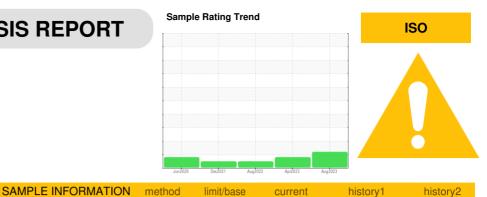


### **OIL ANALYSIS REPORT**



# TK253 - CAPITOL SUPPLY

Hydraulic System Fluid AW HYDRAULIC OIL ISO 32 (--- GAL)

#### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

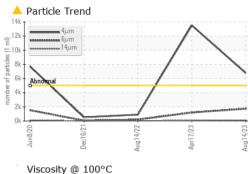
#### Fluid Condition

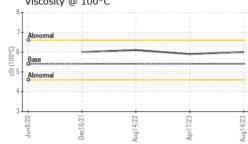
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

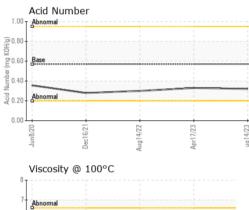
Sample Date(Client Info14 Aug 202317 Apr 202314 Aug 2024Machine AgehrsClient Info000Oil AgehrsClient Info000Oil ChangedClient InfoN/ANot ChangedN/ASample StatusImageClient InfoN/AABNORMALNORMALWEAR METALSmethodlimit/basecurrenthistory1history2IronppmASTM 05185m>20444ChromiumppmASTM 05185m>10000NickelppmASTM 05185m>10000ItaniumppmASTM 05185m>10000AluminumppmASTM 05185m>10000AuminumppmASTM 05185m>10000AutimonyppmASTM 05185m>10000AntimonyppmASTM 05185m>10000AutimumppmASTM 05185m5000AutimumppmASTM 05185m5000AutimumppmASTM 05185m5000AutimumppmASTM 05185m5000AutimumppmASTM 05185m5000AutimumppmASTM 05185m5000AutimumppmASTM 05185m5 <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>WC0772502</th> <th>WC0698829</th> <th>WC0679391</th>	Sample Number		Client Info		WC0772502	WC0698829	WC0679391
Oil Age     hrs     Client Info     N/A     Not Changd     N/A       Sample Status     I     Image     Current     Nistory1     Nistory1       WEAR METALS     method     Imit/base     current     history1     Nistory2       Iron     ppm     ASTM D5185m     >20     4     4     4       Chromium     ppm     ASTM D5185m     >10     <1     <1     <1       Nickel     ppm     ASTM D5185m     >10     0     0     0       Itaminum     ppm     ASTM D5185m     >10     0     0     <1       Lead     ppm     ASTM D5185m     >10     0     0     <1       Lead     ppm     ASTM D5185m     >10     0     0     0       Cadmium     ppm     ASTM D5185m     >10     0     0     0       Astm D5185m     >10     0     0     0     0     0       Astm D5185m     5     0     0     1     1     1     1 <th>Sample Date</th> <th></th> <th>Client Info</th> <th></th> <th>14 Aug 2023</th> <th>17 Apr 2023</th> <th>14 Aug 2022</th>	Sample Date		Client Info		14 Aug 2023	17 Apr 2023	14 Aug 2022
Oil Changed Sample Status     Client Info     N/A     Not Changd ATTENTION     N/A       WEAR METALS     method     Imit/base     current     history1     history2       Iron     ppm     ASTN D5185m     >20     4     4     4       Chromium     ppm     ASTN D5185m     >10     <1     <1     <1       Nickel     ppm     ASTN D5185m     >10     0     0     0       Silver     ppm     ASTN D5185m     >10     0     0     0       Copper     ppm     ASTN D5185m     >10     0     0     0       Cadmium     ppm     ASTN D5185m     >10     0     0     0       Cadmium     ppm     ASTN D5185m     >10     0     0     0       Cadmium     ppm     ASTN D5185m     5     0     0     1       AstN D5185m     5     0     0     0     1     1       Mandanese     ppm     ASTN D5185m     5     0     0     1	Machine Age	hrs	Client Info		0	0	0
Sample Status     method     Imit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     4     4     4       Chromium     ppm     ASTM D5185m     >10     <1     <1     <1       Nickel     ppm     ASTM D5185m     >10     0     0     0       Silver     ppm     ASTM D5185m     0     0     0     0       Aluminum     ppm     ASTM D5185m     10     0     0     0       Aluminum     ppm     ASTM D5185m     >10     0     0     0     0       Aluminum     ppm     ASTM D5185m     >10     0     0     0     0     0       Addium     ppm     ASTM D5185m     >10     0	Oil Age	hrs	Client Info		0	0	0
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     4     4     4       Chromium     ppm     ASTM D5185m     >10     0     0     0       Nickel     ppm     ASTM D5185m     >10     0     0     0       Silver     ppm     ASTM D5185m     >10     0     0     0       Aluminum     ppm     ASTM D5185m     >10     0     0     0       Aluminum     ppm     ASTM D5185m     >10     0     0     0       Aduminum     ppm     ASTM D5185m     >10     0     0     0       Antimony     ppm     ASTM D5185m     >10     0     0     0       Antimony     ppm     ASTM D5185m     5     0     0     0     0       Antimony     ppm     ASTM D5185m     5     0     0     1     1     1       Boron     pd     ASTM D5185m <t< th=""><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>N/A</th><th>Not Changd</th><th>N/A</th></t<>	Oil Changed		Client Info		N/A	Not Changd	N/A
Iron     ppm     ASTM D5185m     >20     4     4     4       Chromium     ppm     ASTM D5185m     >10     <1	Sample Status				ATTENTION	ABNORMAL	NORMAL
Chromium     ppm     ASTM D5185m     >10     <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel     ppm     ASTM D5185m     >10     0     0     0       Titanium     ppm     ASTM D5185m     0     0     0     0       Silver     ppm     ASTM D5185m     10     0     0     0       Aluminum     ppm     ASTM D5185m     >10     0     0     0       Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >10     0     0     0       Yanadium     ppm     ASTM D5185m     >10     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDTIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     5     0     0     0       Maganese     ppm     ASTM D5185m     5     0     0     0       Maganesium     ppm     ASTM D5185m     200     83     86     82	Iron	ppm	ASTM D5185m	>20	4	4	4
Titanium     ppm     ASTM D5185m     0     0     0       Silver     ppm     ASTM D5185m     0     0     0       Aluminum     ppm     ASTM D5185m     >10     0     0     0       Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >75     <1	Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Silver     ppm     ASTM D5185m     0     0     0       Aluminum     ppm     ASTM D5185m     >10     0     0     <1	Nickel	ppm	ASTM D5185m	>10	0	0	0
Aluminum     ppm     ASTM D5185m     >10     0     0     <1       Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >75     <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead     ppm     ASTM D5185m     >10     0     0     0       Copper     ppm     ASTM D5185m     >75     <1	Silver	ppm	ASTM D5185m		0	0	0
Copper     ppm     ASTM D5185m     >75     <1     <1     1       Tin     ppm     ASTM D5185m     >75     <1	Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Tin     ppm     ASTM D5185m     >10     0     0     0       Antimony     ppm     ASTM D5185m     0     0     0       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     5     0     0     0       Manganese     ppm     ASTM D5185m     5     0     0     <1	Lead	ppm	ASTM D5185m	>10	0	0	0
Antimony     ppm     ASTM D5185m         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     5     0     0     0       Manganese     ppm     ASTM D5185m     5     0     0     <1	Copper	ppm	ASTM D5185m	>75	<1	<1	1
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     5     0     0     1       Barium     ppm     ASTM D5185m     5     0     0     1       Manganese     ppm     ASTM D5185m     5     0     0     1       Magnesium     ppm     ASTM D5185m     25     30     31     35       Calcium     ppm     ASTM D5185m     200     83     86     82       Phosphorus     ppm     ASTM D5185m     200     83     86     82       Sulfur     ppm     ASTM D5185m     200     4044     4109     3959       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     Q     Q     Q	Tin	ppm	ASTM D5185m	>10	0	0	0
Cadmium     ppm     ASTM D5185m     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     5     0     0     1       Barium     ppm     ASTM D5185m     5     0     0     1       Barium     ppm     ASTM D5185m     5     0     0     1       Magnese     ppm     ASTM D5185m     5     0     0     <1       Magnesium     ppm     ASTM D5185m     25     30     31     35       Calcium     ppm     ASTM D5185m     200     83     86     82       Phosphorus     ppm     ASTM D5185m     200     83     86     82       Sulfur     ppm     ASTM D5185m     200     83     86     82       Sulfur     ppm     ASTM D5185m     200     4044     4109     3959       CONTAMINANTS     method     limit/base     current     history1     his	Antimony	ppm	ASTM D5185m				
ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     5     0     0     1       Barium     ppm     ASTM D5185m     5     0     0     0       Manganese     ppm     ASTM D5185m     5     0     0     <1	Vanadium	ppm	ASTM D5185m		0	0	0
Boron     ppm     ASTM D5185m     5     0     0     1       Barium     ppm     ASTM D5185m     5     0     0     0       Molybdenum     ppm     ASTM D5185m     5     0     0     <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium     ppm     ASTW D5185m     5     0     0     0       Molybdenum     ppm     ASTW D5185m     5     0     0     <1       Manganese     ppm     ASTW D5185m     25     30     31     35       Calcium     ppm     ASTM D5185m     25     30     31     35       Calcium     ppm     ASTM D5185m     200     83     86     82       Phosphorus     ppm     ASTM D5185m     200     83     86     82       Sulfur     ppm     ASTM D5185m     300     337     344     351       Zinc     ppm     ASTM D5185m     370     391     401     422       Sulfur     ppm     ASTM D5185m     2500     4044     4109     3959       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     0     0     0       FLUID CLEANLINESS     method     limit/base     curre	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum     ppm     ASTM D5185m     5     0     0     <1       Manganese     ppm     ASTM D5185m     25     30     31     35       Calcium     ppm     ASTM D5185m     25     30     31     35       Calcium     ppm     ASTM D5185m     200     83     86     82       Phosphorus     ppm     ASTM D5185m     300     337     344     351       Zinc     ppm     ASTM D5185m     300     337     344     351       Sulfur     ppm     ASTM D5185m     370     391     401     422       Sulfur     ppm     ASTM D5185m     2500     4044     4109     3959       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     <1     <1     <1       Potassium     ppm     ASTM D5185m     >20     0     0     0       FLUID CLEANLINESS     method     limit/base	Boron	ppm	ASTM D5185m	5	0	0	1
Manganese   ppm   ASTM D5185m   <1   <1   0     Magnesium   ppm   ASTM D5185m   25   30   31   35     Calcium   ppm   ASTM D5185m   200   83   86   82     Phosphorus   ppm   ASTM D5185m   300   337   344   351     Zinc   ppm   ASTM D5185m   370   391   401   422     Sulfur   ppm   ASTM D5185m   2500   4044   4109   3959     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >20   <1	Barium	ppm	ASTM D5185m	5	0	0	0
Magnesium   ppm   ASTM D5185m   25   30   31   35     Calcium   ppm   ASTM D5185m   200   83   86   82     Phosphorus   ppm   ASTM D5185m   300   337   344   351     Zinc   ppm   ASTM D5185m   370   391   401   422     Sulfur   ppm   ASTM D5185m   2500   4044   4109   3959     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >20   <1   <1   <1     Potassium   ppm   ASTM D5185m   >20   <1   <1   <1     Potassium   ppm   ASTM D5185m   >20   <0   0   0     FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   >5000   6785   13509   902     Particles >14µm   ASTM D7647   >100   1742   1199   191     Particles >21µm   ASTM D7647   >40 <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>5</td> <th>0</th> <td>0</td> <td>&lt;1</td>	Molybdenum	ppm	ASTM D5185m	5	0	0	<1
Calcium   ppm   ASTM D5185m   200   83   86   82     Phosphorus   ppm   ASTM D5185m   300   337   344   351     Zinc   ppm   ASTM D5185m   370   391   401   422     Sulfur   ppm   ASTM D5185m   2500   4044   4109   3959     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >20   <1	Manganese	ppm	ASTM D5185m		<1	<1	0
Phosphorus     ppm     ASTM D5185m     300     337     344     351       Zinc     ppm     ASTM D5185m     370     391     401     422       Sulfur     ppm     ASTM D5185m     2500     4044     4109     3959       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     <1	Magnesium	ppm	ASTM D5185m	25	30	31	35
Zinc   ppm   ASTM D5185m   370   391   401   422     Sulfur   ppm   ASTM D5185m   2500   4044   4109   3959     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >20   <1	Calcium	ppm	ASTM D5185m	200	83	86	82
SulfurppmASTM D5185m2500404441093959CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>20<1	Phosphorus	ppm	ASTM D5185m	300	337	344	351
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>20<1	Zinc	ppm	ASTM D5185m	370	391	401	422
Silicon   ppm   ASTM D5185m   >20   <1   <1   <1     Sodium   ppm   ASTM D5185m   >20   0   0   0     Potassium   ppm   ASTM D5185m   >20   0   0   0     FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   >5000   ▲ 6785   ▲ 13509   902     Particles >6µm   ASTM D7647   >1300   ▲ 1742   1199   191     Particles >6µm   ASTM D7647   >160   97   61   24     Particles >14µm   ASTM D7647   >40   22   17   9     Particles >21µm   ASTM D7647   >10   0   1   0     Particles >38µm   ASTM D7647   >3   0   0   0     Particles >71µm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   19/17/14   20/18/14   21/17/13   17/15/12     FLUID DEGRADATION   method   limit/base   current   history1   history2 <td>Sulfur</td> <td>ppm</td> <td>ASTM D5185m</td> <td>2500</td> <th>4044</th> <td>4109</td> <td>3959</td>	Sulfur	ppm	ASTM D5185m	2500	4044	4109	3959
Sodium     ppm     ASTM D5185m     <1     1       Potassium     ppm     ASTM D5185m     >20     0     0     0       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >5000     ▲ 6785     ▲ 13509     902       Particles >6µm     ASTM D7647     >100     ▲ 1742     1199     191       Particles >14µm     ASTM D7647     >160     97     61     24       Particles >21µm     ASTM D7647     >40     22     177     9       Particles >38µm     ASTM D7647     >10     0     1     0       Particles >71µm     ASTM D7647     >3     0     0     0       Oli Cleanliness     ISO 4406 (c)     >19/17/14     20/18/14     21/17/13     17/15/12       FLUID DEGRADATION     method     limit/base     current     history1     history2	CONTAMINANTS	\$	method	limit/base	current	history1	history2
Potassium     ppm     ASTM D5185m     >20     0     0     0       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >5000     ▲ 6785     ▲ 13509     902       Particles >6µm     ASTM D7647     >1300     ▲ 1742     1199     191       Particles >14µm     ASTM D7647     >160     97     61     24       Particles >21µm     ASTM D7647     >40     22     17     9       Particles >38µm     ASTM D7647     >10     0     1     0       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/14     20/18/14     21/17/13     17/15/12       FLUID DEGRADATION     method     limit/base     current     history1     history2	Silicon	ppm	ASTM D5185m	>20	<1	<1	<1
FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   >5000   ▲ 6785   ▲ 13509   902     Particles >6µm   ASTM D7647   >1300   ▲ 1742   1199   191     Particles >6µm   ASTM D7647   >160   97   61   24     Particles >14µm   ASTM D7647   >40   22   17   9     Particles >21µm   ASTM D7647   >10   0   1   0     Particles >38µm   ASTM D7647   >10   0   1   0     Particles >71µm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >19/17/14   20/18/14   21/17/13   17/15/12     FLUID DEGRADATION   method   limit/base   current   history1   history2	Sodium	ppm	ASTM D5185m		<1	<1	1
Particles >4μm   ASTM D7647   >5000   ▲ 6785   ▲ 13509   902     Particles >6μm   ASTM D7647   >1300   ▲ 1742   1199   191     Particles >14μm   ASTM D7647   >160   97   61   24     Particles >21μm   ASTM D7647   >40   22   17   9     Particles >38μm   ASTM D7647   >10   0   1   0     Particles >71μm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >19/17/14   20/18/14   21/17/13   17/15/12	Potassium	ppm	ASTM D5185m	>20	0	0	0
Particles >6µm     ASTM D7647     >1300     ▲ 1742     1199     191       Particles >14µm     ASTM D7647     >160     97     61     24       Particles >21µm     ASTM D7647     >40     22     17     9       Particles >38µm     ASTM D7647     >10     0     1     0       Particles >38µm     ASTM D7647     >3     0     0     0       Oli Cleanliness     ISO 4406 (c)     >19/17/14     20/18/14     21/17/13     17/15/12       FLUID DEGRADATION     method     limit/base     current     history1     history2	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14µm   ASTM D7647   >160   97   61   24     Particles >21µm   ASTM D7647   >40   22   17   9     Particles >38µm   ASTM D7647   >10   0   1   0     Particles >38µm   ASTM D7647   >3   0   0   0     Particles >71µm   ASTM D7647   >3   0   0   0     Oil Cleanliness   ISO 4406 (c)   >19/17/14   20/18/14   21/17/13   17/15/12     FLUID DEGRADATION   method   limit/base   current   history1   history2	Particles >4µm		ASTM D7647	>5000	<b>6</b> 785	13509	902
Particles >21μm     ASTM D7647     >40     22     17     9       Particles >38μm     ASTM D7647     >10     0     1     0       Particles >38μm     ASTM D7647     >3     0     0     0       Particles >71μm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/14     20/18/14     21/17/13     17/15/12       FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >6µm		ASTM D7647	>1300	<u> </u>	1199	191
Particles >38μm     ASTM D7647     >10     0     1     0       Particles >71μm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/14     20/18/14     21/17/13     17/15/12       FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >14µm		ASTM D7647	>160	97	61	24
Particles >71μm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/14     20/18/14     21/17/13     17/15/12       FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >21µm		ASTM D7647	>40	22	17	9
Oil Cleanliness     ISO 4406 (c)     >19/17/14     20/18/14     21/17/13     17/15/12       FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >38µm				0	1	0
FLUID DEGRADATION method limit/base current history1 history2	Particles >71µm		ASTM D7647	>3	0	0	0
	Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>20/18/14</b>	🔺 21/17/13	17/15/12
Acid Number (AN)     mg KOH/g     ASTM D8045     0.57     0.32     0.33     0.30	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.32	0.33	0.30

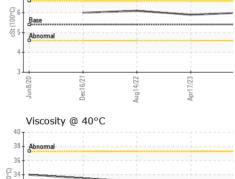


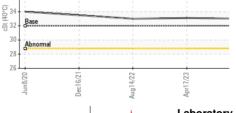
## **OIL ANALYSIS REPORT**











Certificate L2367

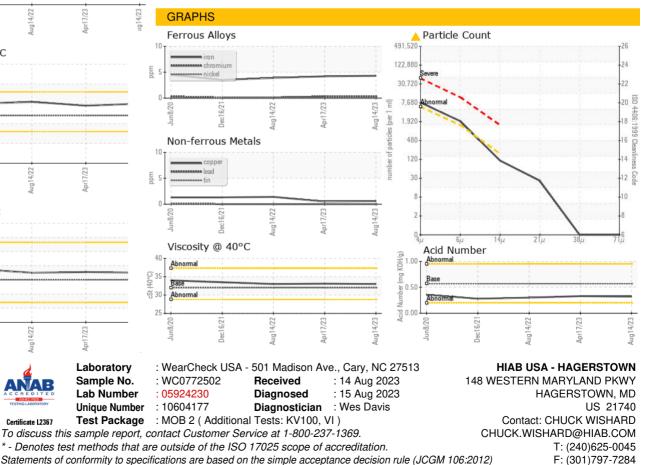
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VISUAL		method	limit/base	current	history1	history2
VIOUAL		method	IIIIII/Dase	Current	history	Thistory2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	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	>0.1	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	32	33.0	33.1	33.0
Visc @ 100°C	cSt	ASTM D445	5.4	6	5.9	6.1
Viscosity Index (VI)	Scale	ASTM D2270	102	128	123	134
SAMPLE IMAGES	6	method	limit/base	current	history1	history2





Bottom



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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