

## WEAR NORMAL CONTAMINATION ABNORMAL FLUID CONDITION NORMAL

# NOT GIVEN WC0664448

#### Component Hydraulic System

{not provided} (--- GAL)

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We recommend you service the filters on this component. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

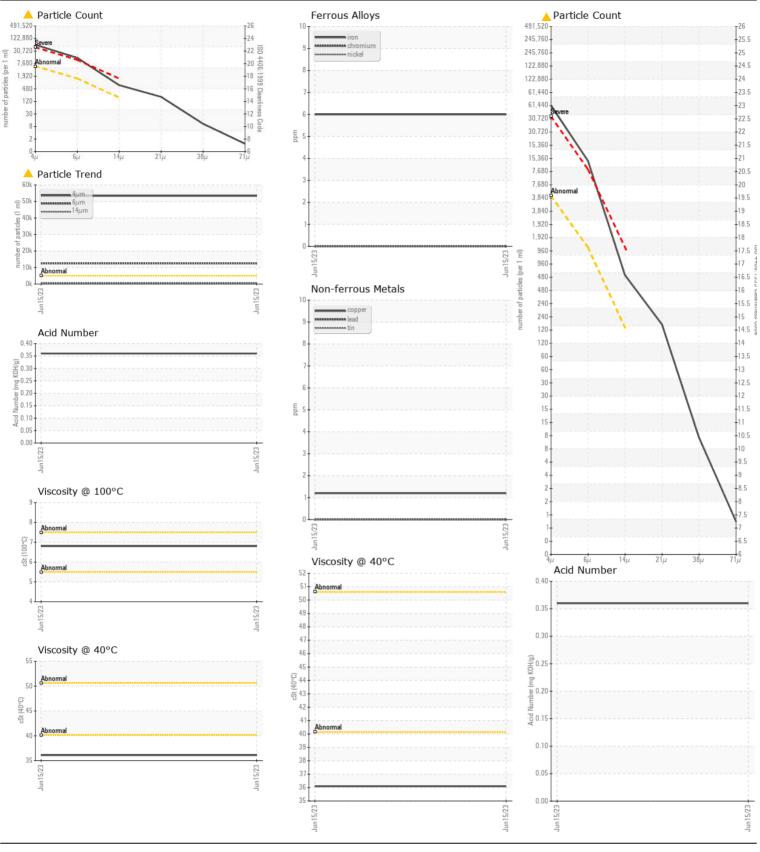
## CONTAMINATION

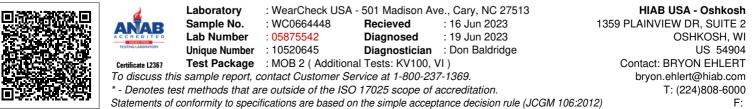
There is a high amount of particulates present in the oil.

### FLUID CONDITION

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

Test         UOM         Method         Limit/Ab         Current         History1         History2           Sample Number         Client Info         WC066448             Sample Date         Client Info         0             Oil Age         hrs         Client Info         0             Oil Age         hrs         Client Info         N/A             Filter Age         hrs         Client Info         N/A             Sample Status         Client Info         N/A              Sample Status         STM D5185m         >10         0             Iron         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Vanadium         ppm							
Sample Date         Client Info         15 Jun 2023             Machine Age         hrs         Client Info         0             Oil Age         hrs         Client Info         0             Oil Changed         Client Info         N/A             Filter Age         hrs         Client Info         N/A             Filter Changed         Client Info         N/A              Sample Status          ASTM 55185m         >20         6             Nickel         ppm         ASTM 55185m         >10         0             Silver         ppm         ASTM 55185m         >10         0             Aluminum         ppm         ASTM 55185m         >10         0             Aluminum         ppm         ASTM 55185m         >10         0             Vanadium         ppm         ASTM 55185m         >20         <1             Vellow Metal	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age         hrs         Client Info         0             Oil Age         hrs         Client Info         0             Filter Age         hrs         Client Info         N/A             Sample Status         Client Info         N/A             Sample Status         ABNORMAL             Iron         ppm         ASTM D5185m         >20         6             Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         10         0             Silver         ppm         ASTM D5185m         10         0             Lead         ppm         ASTM D5185m         >10         0             Vanadum         ppm         ASTM D5185m         >10         0             Vanadum         ppm         ASTM D5185m         >20         1             Vanadum         ppm         ASTM D5185m	Sample Number		Client Info		WC0664448		
Oil Age         hrs         Client Info         0             Filter Age         hrs         Client Info         N/A             Oil Changed         Client Info         N/A             Sample Status         Client Info         N/A             Iron         ppm         ASTM D5185m         >20         6             Iron         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         0             Silver         ppm         ASTM D5185m         10         0             Aluminum         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadum         ppm         ASTM D5185m         >20         1             Yeliow Metal         scalar         Yusual         NONE         NONE             Yel	Sample Date		Client Info		15 Jun 2023		
Filter Age         hrs         Client Info         0             Gil Changed         Client Info         N/A             Sample Status         Client Info         N/A             Sample Status         Client Info         N/A             Sample Status         StM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         0             Silver         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >20         <1             Vanadium         ppm         ASTM D5185m         >20         <1             Vanadium         ppm	Machine Age	hrs	Client Info		0		
Oil Changed         Client Info         N/A             Filter Changed         Client Info         N/A          ABNORMAL            Sample Status         ABNORMAL          ABNORMAL            Iron         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         0         0             Silver         ppm         ASTM D5185m         10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0         0             Vanadium         ppm         ASTM D5185m         20         <1             Vanadium         ppm         ASTM D5185m         >20         <1	Oil Age	hrs	Client Info		0		
Oil Changed         Client Info         N/A             Filter Changed         Client Info         N/A          ABNORMAL            Sample Status         ABNORMAL          ABNORMAL            Iron         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         0         0             Silver         ppm         ASTM D5185m         10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0         0             Vanadium         ppm         ASTM D5185m         20         <1             Vanadium         ppm         ASTM D5185m         >20         <1	U U	hrs	Client Info		0		
Filter Changed         Client Info         N/A             Sample Status         ABNORMAL              Iron         ppm         ASTM D5185m         >20         6             Nickel         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         0         0             Silver         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Value         volual         scalar         *Visual         NONE         NONE            Vellow Metal         scalar         *Visual         NONE         NONE             Vellow Metal         scalar         *Visual         NONE         NONE	-				-		
Sample Status         ABNORMAL            Iron         ppm         ASTM D5185m         >20         6            Chromium         ppm         ASTM D5185m         >10         0            Nickel         ppm         ASTM D5185m         >10         0            Nickel         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >20         -1            Vanadium         ppm         ASTM D5185m         >20         -1	-		Client Info		N/A		
Iron         ppm         ASTM D5185m         >20         6             Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         0             Silver         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >20         1             Vellow Metal         scalar         *Visual         NONE             Silicon         ppm         ASTM D7647         >100         ASTM P647             Particles >4µm         ASTM D7647         >10							
Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         0             Silver         ppm         ASTM D5185m         0         0             Silver         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >20         0             Vanadium         ppm         ASTM D5185m         >20         1             Vallow Metal         scalar         *Visual         NONE             Paticles >4µm         ASTM D7647         >1300         A 12478             Paticles >1µm         ASTM D7647         >31							
Nickel         ppm         ASTM D5185m         >10         0             Titanium         ppm         ASTM D5185m         0             Silver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >20         1             Vellow Metal         scalar         *Visual         NONE         NONE             Potassium         ppm         ASTM D5185m         >20         1             Vater         WC Method         >0.1         NEG             Particles >4µm         ASTM D7647         >1300         1242478	Iron	ppm	ASTM D5185m	>20	6		
Titanium         ppm         ASTM D5185m         0             Silver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0         0             Vanadium         ppm         ASTM D5185m         0         0             Vanadium         ppm         ASTM D5185m         >20         <1             Vanadium         ppm         ASTM D5185m         >20         1             Valeo         water         WC Method         >0.1         NEG             Particles >4µm         ASTM D7647         >100         4         12478             Particles >51µm         ASTM D7647         >10         9 <t< th=""><th>Chromium</th><th>ppm</th><th>ASTM D5185m</th><th>&gt;10</th><th>0</th><th></th><th></th></t<>	Chromium	ppm	ASTM D5185m	>10	0		
Silver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0         0             Vanadium         ppm         ASTM D5185m         0         0             Vanadium         ppm         ASTM D5185m         >20         <1             Vanadium         ppm         ASTM D5185m         >20         1             Value         WC Method         >0.1         NCNE             Particles >4µm         ASTM D7647         >100         A         12478            Particles >5µm         ASTM D7647         >10         9             Particles >6µm         ASTM D7647         >10         9	Nickel	ppm	ASTM D5185m	>10	0		
Silver         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0         0             Vanadium         ppm         ASTM D5185m         >20         C1             Vanadium         ppm         ASTM D5185m         >20         I             Vallow Metal         scalar         "Visual         NONE         I<             Paticles >4µm         ASTM D7647         >100         A 173             Particles >6µm         ASTM D7647         >10         9             Particles >71µm         ASTM D7647         >10         9             Particles >71µm         ASTM D7647         10         9	Titanium	ppm	ASTM D5185m		0		
Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >75         1             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >20         1             Vellow Metal         scalar         *Visual         NONE         NONE             Potassium         ppm         ASTM D5185m         >20         1             Vater         WC Method         >0.1         NEG              Particles >4µm         ASTM D7647         >100         ASTM 23738             Particles >38µm         ASTM D7647         >10         ASTM 23716             Particles >71µm         ASTM D7647	Silver		ASTM D5185m		0		
Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >75         1             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0         0             Vanadium         ppm         ASTM D5185m         >00              White Metal         scalar         *Visual         NONE         NONE             Potassium         ppm         ASTM D5185m<>20         1             Particles >4µm         ASTM D7647         >5000         -53378             Particles >6µm         ASTM D7647         >100         4         12478             Particles >1µm         ASTM D7647         >10         9             Particles >1µm         ASTM D7647         >3         1	Aluminum		ASTM D5185m	>10	0		
Copper         ppm         ASTM D5185m         >75         1             Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Potassium         ppm         ASTM D5185m         >20         1             Particles >4µm         ASTM D7647         >5000         ▲ 53378             Particles >4µm         ASTM D7647         >100         ▲ 629             Particles >4µm         ASTM D7647         >10         9             Particles >4µm         ASTM D7647         >10         9             Particles >1µm         ASTM D7647         >1         9             Particles >2µm         ASTM D7647         >1         9 <th></th> <th></th> <th></th> <th>-</th> <th>-</th> <th></th> <th></th>				-	-		
Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0             White Metal         scalar         *Visual         NONE         NONE            Yellow Metal         scalar         *Visual         NONE         NONE            Silicon         ppm         ASTM D5185m         >20         1            Potassium         ppm         ASTM D5185m         >20         1            Water         WC Method         >0.1         NEG             Particles >4µm         ASTM D7647         >5000 <b>A</b> 53378             Particles >4µm         ASTM D7647         >100 <b>A</b> 12478             Particles >3µm         ASTM D7647         >10 <b>9</b> Particles >71µm         ASTM D7647         >3         1             Soil Cleanliness         ISO 4406 (c)         >1917/14 <b>4</b> 23/21/16             Soil Cleanliness							
Vanadium         ppm         ASTM D5185m         0             White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Silicon         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Patricles >4µm         ASTM D7647         >5000 <b>A</b> 53378             Particles >6µm         ASTM D7647         >100 <b>A</b> 12478             Particles >71µm         ASTM D7647         >100 <b>A</b> 173             Particles >71µm         ASTM D7647         >3         1             Particles >71µm         ASTM D7647         >3         1             Oil Cleanliness         ISO 4406 (c)         >1917/14 <b>A</b> 23/21/16             Solit         scalar         *Visual         NONE					-		
White Metal         scalar         *Visual         NONE         •···         ····           Yellow Metal         scalar         *Visual         NONE         •···         ····           Silicon         ppm         ASTM D5185m         >20         <1         ····         ····           Potassium         ppm         ASTM D5185m         >20         1         ····         ····           Paticles >4µm         ASTM D7647         >5000 <b>A</b> 53378         ····         ····           Particles >6µm         ASTM D7647         >100 <b>A</b> 12478         ····         ····           Particles >6µm         ASTM D7647         >100 <b>A</b> 173         ····         ····           Particles >38µm         ASTM D7647         >3 <b>1</b> ····         ····           Particles >38µm         ASTM D7647         >3 <b>1</b> ····         ····           Particles >38µm         ASTM D7647         >3 <b>1</b> ····         ····           Silt         scalar         *Visual         NONE         NONE         ····         ····           Silt         scalar         *Visual         NORE         ·····         ····         ····					-		
Yellow Metal         scalar         *Visual         NONE             Silicon         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Water         WC Method         >0.1         NEG             Particles >4µm         ASTM D7647         >5000 <b>A</b> 53378             Particles >6µm         ASTM D7647         >100 <b>A</b> 12478             Particles >6µm         ASTM D7647         >10 <b>9</b> Particles >71µm         ASTM D7647         >3         1             Particles >71µm         ASTM D7647         >3         1             Silt         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NORML         NORML				NONE	-		
Silicon         ppm         ASTM D5185m         >20         <1					-		
Potassium         ppm         ASTM D5185m         >20         1             Water         WC Method         >0.1         NEG             Particles >4µm         ASTM D7647         >5000         ▲ 53378             Particles >6µm         ASTM D7647         >1300         ▲ 12478             Particles >14µm         ASTM D7647         >10         ●         629             Particles >14µm         ASTM D7647         >10         ●         9             Particles >1µm         ASTM D7647         >3         1		Jouran	violal				
Potassium         ppm         ASTM D5185m         >20         1             Water         WC Method         >0.1         NEG             Particles >4µm         ASTM D7647         >5000         53378             Particles >6µm         ASTM D7647         >1300         12478             Particles >6µm         ASTM D7647         >100         9             Particles >1µm         ASTM D7647         >10         9             Particles >71µm         ASTM D7647         >3         1             Particles >71µm         ASTM D7647         >3         1             Silt         scalar         *Visual         NONE         23/21/16             Silt         scalar         *Visual         NONE         IGHT             Sad/Dirt         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         NORML         NORML </th <th>Silicon</th> <th>ppm</th> <th>ASTM D5185m</th> <th>&gt;20</th> <th>&lt;1</th> <th></th> <th></th>	Silicon	ppm	ASTM D5185m	>20	<1		
Water         WC Method         >0.1         NEG            Particles >4µm         ASTM D7647         >5000         ▲ 53378             Particles >6µm         ASTM D7647         >1300         ▲ 12478             Particles >14µm         ASTM D7647         >160         ▲ 629             Particles >21µm         ASTM D7647         >10         9             Particles >38µm         ASTM D7647         >10         9             Particles >71µm         ASTM D7647         >3         1             Oil Cleanliness         ISO 4406 (c)         >1917/14         ▲ 23/21/16             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NORM         NORML             Agpearance         scalar         *Visual         NORML         NORML             Cdor         scalar         *Visual         NORML         NORML	Potassium			>20			
Particles >4µm         ASTM D7647         >5000         ▲ 53378             Particles >6µm         ASTM D7647         >1300         ▲ 12478             Particles >14µm         ASTM D7647         >160         ▲ 629             Particles >21µm         ASTM D7647         >10         9             Particles >38µm         ASTM D7647         >10         9             Particles >71µm         ASTM D7647         >3         1             Particles >71µm         ASTM D7647         >3         1             Oil Cleanliness         ISO 4406 (c)         >19171/4         ▲ 23/21/16             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         NORML         NORML             Boron         ppm         ASTM D5185m         0	Water				NEG		
Particles >6µm       ASTM D7647       >1300       12478           Particles >14µm       ASTM D7647       >160       629           Particles >21µm       ASTM D7647       >40       173           Particles >38µm       ASTM D7647       >10       9           Particles >71µm       ASTM D7647       >3       1           Oil Cleanliness       ISO 4406 (c)       >19/17/14       23/21/16           Silt       scalar       *Visual       NONE       NONE           Sold Cleanliness       scalar       *Visual       NONE       NONE           Sold Cleanliness       scalar       *Visual       NONE       NONE           Sold Cleanliness       scalar       *Visual       NORML       NORML           Sodiw       scalar       *Visual       NORML       NORML           Boron       ppm       ASTM D5185m       0            Barium       ppm       ASTM D5185m							
Particles >14µm         ASTM D7647         >160         629             Particles >21µm         ASTM D7647         >40         173             Particles >38µm         ASTM D7647         >10         9             Particles >71µm         ASTM D7647         >3         1             Oil Cleanliness         ISO 4406 (c)         >19/17/14         23/21/16             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         ILIGHT             Sand/Dirt         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Baroin         ppm         ASTM D5185m         0              Baroin         ppm         ASTM D5185m         <1							
Particles >21µm       ASTM D7647       >40       173           Particles >38µm       ASTM D7647       >10       9           Particles >71µm       ASTM D7647       >3       1           Oil Cleanliness       ISO 4406 (c)       >19/17/14 $\checkmark$ 23/21/16           Silt       scalar       *Visual       NONE       NONE           Debris       scalar       *Visual       NONE       LIGHT           Sand/Dirt       scalar       *Visual       NONE       NORE           Appearance       scalar       *Visual       NORML       NORML           Godor       scalar       *Visual       NORML       NORML           Sodium       ppm       ASTM D5185m       0					-		
Particles >38µm         ASTM D7647         >10         9             Particles >71µm         ASTM D7647         >3         1             Oil Cleanliness         ISO 4406 (c)         >19/17/14         A 23/21/16             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         LIGHT             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Sodium         ppm         ASTM D5185m         0             Boron         ppm         ASTM D5185m         2             Molybdenum         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         54							
Particles >71µmASTM D7647 >31Oil CleanlinessISO 4406 (c) >19/17/14 $\checkmark$ 23/21/16Siltscalar*VisualNONEMONEDebrisscalar*VisualNONELIGHTSand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLCodorscalar*VisualNORMLNORMLEmulsified Waterscalar*VisualNORMLSodiumppmASTM D5185m0BoronppmASTM D5185m0BariumppmASTM D5185m2MolybdenumppmASTM D5185m0MagnesiumppmASTM D5185m-<1MagnesiumppmASTM D5185m-<1PhosphorusppmASTM D5185m341ZincppmASTM D5185m457SulfurppmASTM D5185m0.36Visc @ 40°CcStASTM D44536.1Visc @ 100°CcStASTM D4456.8					-		
Oil Cleanliness         ISO 4406 (c)         >19/17/14         ▲ 23/21/16             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         LIGHT             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Godor         scalar         *Visual         NORML         NORML             Godor         scalar         *Visual         >0.1         NEG             Boron         ppm         ASTM D5185m         0              Barium         ppm         ASTM D5185m          <1             Magnesium         ppm							
Siltscalar*VisualNONENONEDebrisscalar*VisualNONELIGHTSand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGSodiumppmASTM D5185m0BoronppmASTM D5185m2BariumppmASTM D5185m2MolybdenumppmASTM D5185m<1MagnesiumppmASTM D5185m<1PhosphorusppmASTM D5185m<54ZincppmASTM D5185m341SulfurppmASTM D5185m457SulfurppmASTM D5185m0.36Acid Number (AN)mg KOHgASTM D80450.361Visc @ 40°CcStASTM D44566.8					-		
Debrisscalar*VisualNONELIGHTSand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLCodorscalar*Visual>0.1NEGEmulsified Waterscalar*Visual>0.1NEGSodiumppmASTM D5185m0BoronppmASTM D5185m2BariumppmASTM D5185m2MolybdenumppmASTM D5185m<1MagnesiumppmASTM D5185m<1MagnesiumppmASTM D5185m<54PhosphorusppmASTM D5185m341ZincppmASTM D5185m457SulfurppmASTM D5185m457Acid Number (AN)mg KOH/gASTM D80450.36Visc @ 40°CcStASTM D44536.1Visc @ 100°CcStASTM D4456.8		coalar					
Sand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGSodiumppmASTM D5185m0BoronppmASTM D5185m0BariumppmASTM D5185m2MolybdenumppmASTM D5185m<1MaganeseppmASTM D5185m<1MagnesiumppmASTM D5185m<1PhosphorusppmASTM D5185m<54ZincppmASTM D5185m457SulfurppmASTM D5185m<457Kid Number (AN)mg KOHgASTM D80450.36Visc @ 40°CcStASTM D44536.1Visc @ 100°CcStASTM D4456.8							
Appearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGSodiumppmASTM D5185m0BoronppmASTM D5185m0BariumppmASTM D5185m2MolybdenumppmASTM D5185m0MagnesiumppmASTM D5185m0MagnesiumppmASTM D5185m54PhosphorusppmASTM D5185m341ZincppmASTM D5185m457SulfurppmASTM D5185m41740Acid Number (AN)mg KOHgASTM D80450.36Visc @ 100°CcStASTM D44566.8							
Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG             Sodium         ppm         ASTM D5185m         0             Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         2             Molybdenum         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         54             Phosphorus         ppm         ASTM D5185m         341             Zinc         ppm         ASTM D5185m         457             Sulfur         ppm         ASTM D5185m         0.366             Visc @ 40°C         cSt         ASTM D445					-		
Emulsified Water         scalar         *Visual         >0.1         NEG            Sodium         ppm         ASTM D5185m         0             Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         2             Molybdenum         ppm         ASTM D5185m         2             Magnesium         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         54             Phosphorus         ppm         ASTM D5185m         341             Zinc         ppm         ASTM D5185m         457             Sulfur         ppm         ASTM D5185m         0.366             Visc @ 40°C         cSt         ASTM D445         36.1							
Sodium         ppm         ASTM D5185m         0            Boron         ppm         ASTM D5185m         0            Barium         ppm         ASTM D5185m         0            Barium         ppm         ASTM D5185m         2            Molybdenum         ppm         ASTM D5185m         2            Manganese         ppm         ASTM D5185m         <1            Magnesium         ppm         ASTM D5185m         <1            Calcium         ppm         ASTM D5185m         <1            Phosphorus         ppm         ASTM D5185m         <341            Zinc         ppm         ASTM D5185m         <457            Sulfur         ppm         ASTM D5185m         <4740            Acid Number (AN)         mg KOHg         ASTM D8045         0.366            Visc @ 40°C         cSt         ASTM D445         <6.8							
Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         2             Molybdenum         ppm         ASTM D5185m         21             Manganese         ppm         ASTM D5185m         c1             Magnesium         ppm         ASTM D5185m         c1             Calcium         ppm         ASTM D5185m         c1             Phosphorus         ppm         ASTM D5185m         54             Zinc         ppm         ASTM D5185m         341             Sulfur         ppm         ASTM D5185m         457             Sulfur         ppm         ASTM D5185m         4740             Visc @ 40°C         cSt         ASTM D445         0.36             Visc @ 100°C         cSt         ASTM D445         6.8	Emuisined water	scalar	visuai	>0.1	NEG		
Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         2             Molybdenum         ppm         ASTM D5185m         21             Manganese         ppm         ASTM D5185m         c1             Magnesium         ppm         ASTM D5185m         c1             Calcium         ppm         ASTM D5185m         c1             Phosphorus         ppm         ASTM D5185m         54             Zinc         ppm         ASTM D5185m         341             Sulfur         ppm         ASTM D5185m         457             Sulfur         ppm         ASTM D5185m         4740             Visc @ 40°C         cSt         ASTM D445         0.36             Visc @ 100°C         cSt         ASTM D445         6.8	Sodium	nnm	ASTM D5185m		0		
Barium         ppm         ASTM D5185m         2             Molybdenum         ppm         ASTM D5185m         <1							
Molybdenum         ppm         ASTM D5185m         <1							
Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         <1							
Magnesium         ppm         ASTM D5185m         <1							
Calcium         ppm         ASTM D5185m         54             Phosphorus         ppm         ASTM D5185m         341             Zinc         ppm         ASTM D5185m         457             Sulfur         ppm         ASTM D5185m         4740             Acid Number (AN)         mg KOH/g         ASTM D8045         0.36             Visc @ 40°C         cSt         ASTM D445         36.1             Visc @ 100°C         cSt         ASTM D445         6.8	Ū						
Phosphorus         ppm         ASTM D5185m         341             Zinc         ppm         ASTM D5185m         457             Sulfur         ppm         ASTM D5185m         4740             Acid Number (AN)         mg KOH/g         ASTM D8045         0.36             Visc @ 40°C         cSt         ASTM D445         36.1             Visc @ 100°C         cSt         ASTM D445         6.8	-						
Zinc         ppm         ASTM D5185m         457             Sulfur         ppm         ASTM D5185m         4740             Acid Number (AN)         mg KOH/g         ASTM D8045         0.36             Visc @ 40°C         cSt         ASTM D445         36.1             Visc @ 100°C         cSt         ASTM D445         6.8							
Sulfur         ppm         ASTM D5185m         4740             Acid Number (AN)         mg KOH/g         ASTM D8045         0.36             Visc @ 40°C         cSt         ASTM D445         36.1             Visc @ 100°C         cSt         ASTM D445         6.8							
Acid Number (AN)         mg KOH/g         ASTM D8045         0.36             Visc @ 40°C         cSt         ASTM D445         36.1             Visc @ 100°C         cSt         ASTM D445         6.8							
Visc @ 40°C         cSt         ASTM D445         36.1             Visc @ 100°C         cSt         ASTM D445         6.8							
Visc @ 100°C cSt ASTM D445 6.8	,						
	-						
VISCOSITY INDEX (VI) SCALE ASIM D22/0 149	-						
	viscosity Index (VI)	Scale	ASTM D2270		149		





Contact/Location: BRYON EHLERT - HIAOSH