

## **OIL ANALYSIS REPORT**

### GUAY SON [CONHER] Machine Id PISA 4 SH - Pacifico Industrial Component

**Hydraulic System** 

## QUAKER STATE DUPLEX AW HYDRAULIC 68 (1000 LTR)

#### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (before filtration). ( Customer Sample Comment: Sample take at 11:25 AM (before filtration) )

#### Wear

All component wear rates are normal.

#### Contamination

There is a high 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.

Machine Age     hrs       Dil Age     hrs       Dil Changed     hrs       Sample Status     Image       CONTAMINATION     Pare       Water     Image       WEAR METALS     pare       Index     pare       Vater     Image       Vater     pare       Image     pare       Image     pare       Jickel     pare       Jickel     pare       Jinger     pare       Jinger     pare       Auminum     pare       Copper     pare       Copper     pare       ADDITIVES     pare       Boron     pare       Manganese     pare       Manganese     pare       Contaminan     pare       Contaminan     pare       Contaminan     pare       Manganese     pare       Manganese     pare       Manganese     pare       Contaminan     pare       Contaminan     pare       Solicon     pare	Client Info Client Info Client Info WC Method WC Method M ASTM D5185r M ASTM D5185r	b       Iimit/base         b       Iimit/base         d       >0.1         limit/base       Iimit/base         m       >20         n       >10         n       >0.0	NEG 6 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0	KL0013450 21 Dec 2023 0 3 Not Changd ABNORMAL NEG NEG 0 0 0 0 0 0 0 0 0 0 0 0 0	KL0013438 01 Dec 2023 0 24 Not Changd NEG NEG NEG 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Dil Age hrs Dil Changed Sample Status CONTAMINATION Water WEAR METALS Vater PPI Silver PPI Silver PPI Aluminum PPI Silver PPI Aluminum PPI Sadamium PPI Cadmium PPI Calcium PPI Calcium PPI Calcium PPI CoNTAMINANTS Silicon PPI Sodium PPI	s Client Info Client Info Client Info Client Info Client Info WC Method WC Method m ASTM D5185r m ASTM D5185r	b b b c c c c c c c c c c c c c c c c c	0 4 Not Changd ABNORMAL 9 Current 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 3 Not Changd ABNORMAL ABNORMAL NEG 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 24 Not Changd NORMAL NEG NEG ( 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Dil Age     hrs       Dil Changed     hrs       Dil Changed     ample Status       CONTAMINATION     Vater       Water     Vater       WEAR METALS     pp       Jickel     pp       Jickel     pp       Jickel     pp       Silver     pp       Vanadium     pp       Copper     pp       Cadmium     pp       ADDITIVES     pp       Boron     pp       Manganese     pp       Angesium     pp       ContAMINANTS     pp       Contamina     pp       Contamina     pp       Manganese     pp       Contamina     pp       Silicon     pp       Silicon     pp	Client Info Client Info Client Info WC Method WC Method M ASTM D5185r M ASTM D5185r	b       Iimit/base         d       >0.1         limit/base         n       >20         n       >10         n       >0.0	4 Not Changd ABNORMAL Current NEG Current 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 Not Changd ABNORMAL NEG NEG 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24 Not Changd NORMAL NEG NEG (1) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Dil Changed       Sample Status       CONTAMINATION       Vater       WEAR METALS       ron     ppi       Chromium     ppi       Vickel     ppi       Vickel     ppi       Silver     ppi       Numinum     ppi       Copper     ppi       Cadmium     ppi       Anadium     ppi       ADDITIVES     ppi       Boron     ppi       Algnesium     ppi       Aagnesium     ppi       Calcium     ppi       ContAMINANTS     ppi       Silforn     ppi       Sodium     ppi	Client Info method WC Method m ASTM D5185r m ASTM D5185r	Iimit/base         d       >0.1         limit/base         n       >20         n       >10         n       >0.0	Not Changd           ABNORMAL           Current           NEG           Current           6           0	Not Changd           ABNORMAL           history1           NEG           history1           9           0 <td>Not Changd NORMAL history2 NEG history2 &lt;1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td>	Not Changd NORMAL history2 NEG history2 <1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Sample Status     Image: Status       CONTAMINATION       Vater       WEAR METALS       ron     ppi       Jickel     ppi       Jickel     ppi       Silver     ppi       Numinum     ppi       Soopper     ppi       Anadium     ppi       Cadmium     ppi       ADDITIVES     Soron       Barium     ppi       Anganese     ppi       Contaminant     ppi       Contaminant     ppi       Contaminant     ppi       Solicon     ppi       Silicon     ppi       Sodium     ppi	method WC Method MC Method M ASTM D5185r ASTM D5185r	limit/base           d         >0.1           limit/base         limit/base           n         >20           n         >10           n         >0.0	ABNORMAL           current           NEG           current           6           0	ABNORMAL           history1           NEG           9           0	NORMAL           history2           NEG           history2           <1
CONTAMINATION         Vater         WEAR METALS         Chromium       pp         Jickel       pp         Jickel       pp         Silver       pp         Numinum       pp         Auminum       pp         Auminum       pp         Zadadum       pp         Zadadum       pp         Zadamium       pp         ADDITIVES       pp         Boron       pp         Anganese       pp         Zalcium       pp         ContAMINANTS       pp         Sulfur       pp         Sulfur       pp         Sodium       pp         Sodium       pp	WC Method method m ASTM D5185r m ASTM D5185r	d >0.1 limit/base n >20 n >10 n >	<ul> <li>current</li> <li>NEG</li> <li>current</li> <li>6</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>2</li> <li>0</li> <li>0</li> <li>2</li> <li>0</li> <li>0</li> <li>0</li> <li>current</li> <li>0</li> <li>0</li> <li>current</li> <li>0</li> <li>0</li> </ul>	history1           NEG           history1           9           0	history2           NEG           history2           <1
Water         WEAR METALS         ron       ppd         chromium       ppd         lickel       ppd         lickel       ppd         silver       ppd         silver       ppd         loopper       ppd         cadd       ppd         loopper       ppd         loopper       ppd         loopper       ppd         loopper       ppd         Anadium       ppd         Addmium       ppd         Addmium       ppd         Addmium       ppd         Addmium       ppd         Adagnesium       ppd         Alagnesium       ppd         Colsphorus       ppd         Sulfur       ppd         Solicon       ppd         Sodium       ppd	WC Method method m ASTM D5185r m ASTM D5185r	d >0.1 limit/base n >20 n >10 n >	NEG         6         0	NEG history1 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NEG history2 <1 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 history2 0
WEAR METALS         ron       ppi         Chromium       ppi         Vickel       ppi         Silver       ppi         Silver       ppi         Aluminum       ppi         Aluminum       ppi         Jopper       ppi         Copper       ppi         Cadmium       ppi         Anadium       ppi         Addrium       ppi         Addrium       ppi         Adoptitives       ppi         Adoptitives       ppi         Adoptitives       ppi         Aluminum       ppi         Anadium       ppi         Adoptitives       ppi         Adoptitives       ppi         Aluminum       ppi         Adoptitives       ppi         Adoptitives       ppi         Adoptitives       ppi         Aluminum       ppi         Adoptitives       ppi         Adoptitives       ppi         Adoptitives       ppi         Colum       ppi         Contaminum       ppi         Solicon       ppi         Sodium       ppi     <	method         m       ASTM D5185r         m       ASTM D5185r	limit/base         n       >20         n       >10         n       0.0         n       0.0	<ul> <li>current</li> <li>6</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>2</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>current</li> <li>0</li> <li>0</li> <li>0</li> </ul>	history1           9           0           history1           0	<1
ron pp Chromium pp Vickel pp Vickel pp Vickel pp Silver pp Aluminum pp Copper pp Copper pp Copper pp Copper pp Cadmium pp Cadmium pp ADDITIVES Boron pp Barium pp Maganesie pp Maganesie pp Calcium pp Calcium pp Calcium pp ContAMINANTS Silicon pp Sodium pp	m ASTM D5185r m ASTM D5185r	n >20 n >10 n >10 n >10 n >10 n >10 n >10 n >10 n >75 n >10 n >10 n = 10 n = 10	6 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0	9 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0	<1 0 0 0 0 0 0 4 0 0 0 0 0 history2 0
Chromium     pp       Nickel     pp       Nickel     pp       Silver     pp       Silver     pp       Aluminum     pp       Lead     pp       Copper     pp       Copper     pp       Cadmium     pp       ADDITIVES     pp       Boron     pp       Manganese     pp       Magnesium     pp       Calcium     pp       Phosphorus     pp       CONTAMINANTS     pp       Silicon     pp       Sodium     pp	m ASTM D5185r m ASTM D5185r	m >10 m >10 n >10 n >10 n >10 n >10 n >10 n >75 n >10 n >75 n >10 n = 10 n 10 n = 10 n	0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 4 0 0 0 0 0 history2 0
Nickel     ppi       Nickel     ppi       Titanium     ppi       Silver     ppi       Numinum     ppi       Lead     ppi       Copper     ppi       Tin     ppi       Anadium     ppi       Cadmium     ppi       ADDITIVES     ppi       Boron     ppi       Anganese     ppi       Angnesium     ppi       Calcium     ppi       Phosphorus     ppi       ContrAMINANTS     ppi       Silicon     ppi       Sodium     ppi	ASTM D5185r ASTM D5185r ASTM D5185r ASTM D5185r ASTM D5185r ASTM D5185r ASTM D5185r ASTM D5185r ASTM D5185r MASTM D5185r ASTM D5185r ASTM D5185r ASTM D5185r ASTM D5185r	n >10 n >10 n >10 n >10 n >10 n >75 n >10 n >10 n >10 n	0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0
Titanium     ppr       Silver     ppr       Silver     ppr       Numinum     ppr       Lead     ppr       Copper     ppr       Tin     ppr       Vanadium     ppr       Cadmium     ppr       ADDITIVES     ppr       Boron     ppr       Manganese     ppr       Anaganese     ppr       Phosphorus     ppr       CONTAMINANTS     ppr       Silicon     ppr       Sodium     ppr	M ASTM D5185r M ASTM D5185r	m >10 m >10 m >10 m >10 m >75 m >10 m >10 m 10 m 10 m 4.0 m 0.0 m 0.0	0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 3 0 0 0 0 0 history1 0	0 0 0 4 0 0 0 0 0 0 0 0
Silver pp Numinum pp ead pp Copper pp Tin pp Anadium pp Anadium pp ADDITIVES Boron pp Barium pp Maganese pp Magnesium pp Calcium pp Calcium pp ContAMINANTS Silicon pp Sodium pp	m ASTM D5185r m ASTM D5185r	m >10 n >10 n >10 n >75 n >10 n >10 n	0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 3 0 0 0 0 0 history1 0	0 0 4 0 0 0 0 history2 0
Numinum     ppi       Lead     ppi       Lead     ppi       Copper     ppi       Tin     ppi       Vanadium     ppi       Anduium     ppi       Cadmium     ppi       ADDITIVES     ppi       Boron     ppi       Barium     ppi       Alganesium     ppi       Calcium     ppi       Chosphorus     ppi       Contaminant     ppi       Silicon     ppi       Sodium     ppi	M ASTM D5185r M ASTM D5185r	m >10 n >10 n >75 n >10 n >10 n 10 n >10 n 10 n 10 n 10 n 0.0 n 0.0	0 0 2 0 0 0 0 0 0 0 0 0	0 0 3 0 0 0 0 0 history1 0	0 0 4 0 0 0 history2 0
ead pp Copper pp Tin pp /anadium pp Cadmium pp Cadmium pp ADDITIVES Boron pp Barium pp Manganese pp Manganese pp Manganese pp Calcium pp Calcium pp Calcium pp Calcium pp ContAMINANTS Silicon pp	m ASTM D5185r m ASTM D5185r	n >10 n >75 n >10 n >10 n limit/base n 4.0 n 0.0 n 0.0	0 2 0 0 0 0 0 0 0 0 0	0 3 0 0 0 0 <u>history1</u> 0	0 4 0 0 0 history2 0
Copper     ppi       Copper     ppi       Fin     ppi       /anadium     ppi       /anadium     ppi       ADDITIVES     and       Boron     ppi       ADDITIVES     and       Boron     ppi       Manganese     ppi       Magnesium     ppi       Phosphorus     ppi       Contraminant     ppi       Solicon     ppi       Sodium     ppi	m ASTM D5185r m ASTM D5185r m ASTM D5185r m ASTM D5185r m ASTM D5185r m ASTM D5185r m ASTM D5185r	m >75 n >10 n limit/base n 4.0 n 0.0 n 0.0	2 0 0 0 0 <del>2</del> 0 0 0	3 0 0 0 0 history1 0	4 0 0 0 history2 0
Fin     pp       /anadium     pp       /anadium     pp       /anadium     pp       Cadmium     pp       ADDITIVES     pp       Boron     pp       Barium     pp       Malganese     pp       Magnesium     pp       Phosphorus     pp       Zinc     pp       Sulfur     pp       Silicon     pp       Sodium     pp	m ASTM D5185r m ASTM D5185r m ASTM D5185r m ASTM D5185r m ASTM D5185r m ASTM D5185r m ASTM D5185r	n >10 n limit/base n 4.0 n 0.0 n 0.0	0 0 0 e current 0 0	0 0 0 history1 0	0 0 0 history2 0
Vanadium     ppi       Cadmium     ppi       ADDITIVES     ppi       Boron     ppi       Barium     ppi       Molybdenum     ppi       Magnesium     ppi       Phosphorus     ppi       Zinc     ppi       Sulfur     ppi       CONTAMINANTS     ppi       Silicon     ppi       Sodium     ppi	m ASTM D5185r m ASTM D5185r method m ASTM D5185r m ASTM D5185r m ASTM D5185r	m limit/base n 4.0 m 0.0 n 0.0	0 0 current 0 0	0 0 history1 0	0 0 history2 0
Cadmium     ppi       ADDITIVES     ppi       Boron     ppi       Barium     ppi       Molybdenum     ppi       Maganese     ppi       Magnesium     ppi       Calcium     ppi       Phosphorus     ppi       Sulfur     ppi       CONTAMINANTS     ppi       Silicon     ppi       Sodium     ppi	m ASTM D5185r method m ASTM D5185r m ASTM D5185r m ASTM D5185r	n limit/base n 4.0 n 0.0 n 0.0	0 current 0 0	0 history1 0	0 history2 0
ADDITIVES Boron pp Barium pp Molybdenum pp Manganese pp Magnesium pp Calcium pp Calcium pp Contaminants pp CONTAMINANTS Silicon pp	method m ASTM D5185r m ASTM D5185r m ASTM D5185r	limit/base n 4.0 n 0.0 n 0.0	e current O O	history1 0	<mark>history2</mark> 0
Boron pp Barium pp Molybdenum pp Maganese pp Magnesium pp Calcium pp Phosphorus pp Contaminant pp CONTAMINANTS Silicon pp Sodium pp	m ASTM D5185r m ASTM D5185r m ASTM D5185r	n 4.0 n 0.0 n 0.0	0 0	0	0
Barium pp Molybdenum pp Manganese pp Magnesium pp Calcium pp Phosphorus pp Calcium pp Calcium pp Contaminants Sulfur pp Solicon pp Sodium pp	m ASTM D5185r m ASTM D5185r	m 0.0 m 0.0	0		
Aolybdenum ppr Aanganese ppr Aagnesium ppr Calcium ppr Calcium ppr Calcium ppr Calcium ppr Contaminants Solicon ppr Sodium ppr	m ASTM D5185r	n <b>0.0</b>	-	0	0
Manganese     pp       Magnesium     pp       Calcium     pp       Phosphorus     pp       Zinc     pp       Sulfur     pp       CONTAMINANTS     pp       Silicon     pp       Sodium     pp			0	-	0
Magnesium     pp       Calcium     pp       Calcium     pp       Phosphorus     pp       Zinc     pp       Sulfur     pp       CONTAMINANTS     pp       Silicon     pp       Sodium     pp	m ASTM D5185r			0	0
Calcium pp Phosphorus pp Zinc pp Sulfur pp CONTAMINANTS Silicon pp Sodium pp		n	0	0	<1
Phosphorus ppr Zinc ppr Sulfur ppr CONTAMINANTS Silicon ppr Sodium ppr	m ASTM D5185r	n 0.1	0	0	<1
Zinc pp Sulfur pp CONTAMINANTS Silicon pp Sodium pp	m ASTM D5185r	m 54	13	13	18
Sulfur pp CONTAMINANTS Silicon pp Sodium pp	m ASTM D5185r	n 272	338	342	321
CONTAMINANTS Silicon pp Sodium pp	m ASTM D5185r	m 357	329	341	371
Silicon ppi Sodium ppi	m ASTM D5185r	n 2434	1418	1423	1483
Sodium pp	method	limit/base	e current	history1	history2
	m ASTM D5185r	n >20	<1	<1	1
) oto o o ium	m ASTM D5185r	n	13	21	2
Potassium pp	m ASTM D5185r	m >20	<1	<1	0
FLUID CLEANLINES	S method	limit/base	e current	history1	history2
Particles >4µm	ASTM D764	7	89300		1889
Particles >6µm	ASTM D764	7 >1300	<u> </u>		203
Particles >14µm	ASTM D764	7 >160	18		11
Particles >21µm	ASTM D764	7 >40	4		3
Particles >38µm	ASTM D764		0		0
Particles >71µm	ASTM D764	7 >3	0		0
Dil Cleanliness	ISO 4406 (c	) >17/14	<b>21/11</b>		15/11
FLUID DEGRADATIO					

Sample Rating Trend

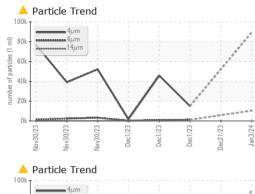
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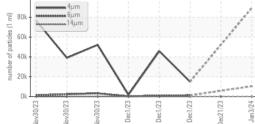
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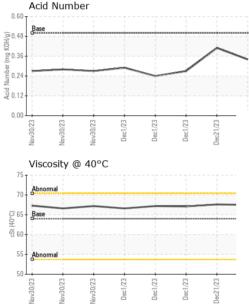
Submitted By: EDUARDO GARCIA



# **OIL ANALYSIS REPORT**

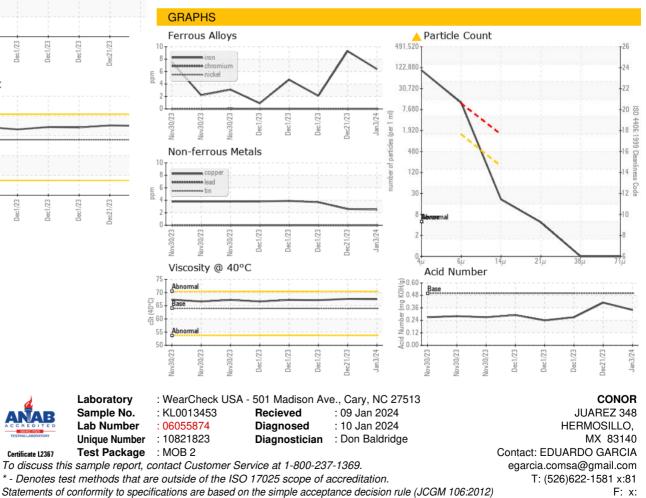






VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	🔺 MODER	NONE
Sand/Dirt	scalar	*Visual	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	64	67.5	67.6	67.2
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				•	•	•

Bottom



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