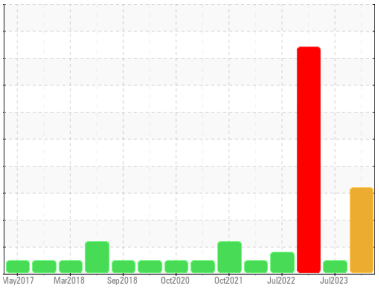
PROBLEM SUMMARY

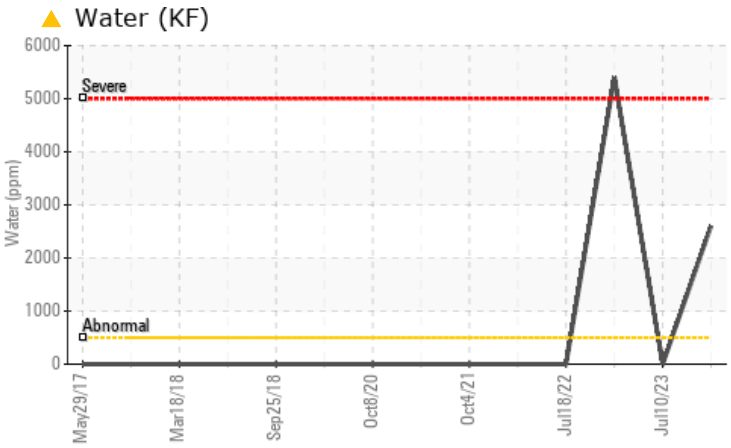
Sample Rating Trend

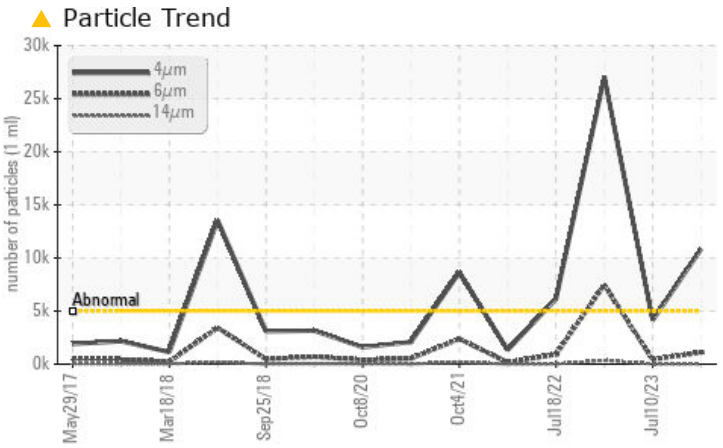


WATER

Machine Id
Studer S31 Universal Grinder # 526 (Neck Ring) - cc4032
Component
Hydraulic System
Fluid
NOT GIVEN (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We advise that you follow the water drain-off procedure for this component. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	SEVERE
Water	%	ASTM D6304*	>0.05	▲ **0.260**	---	⬢ 0.540
ppm Water	ppm	ASTM D6304*	>500	▲ **2603**	---	⬢ 5400.3
Particles >4µm		ASTM D7647	>5000	▲ **10834**	4139	▲ 27035
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/17/11**	19/16/11	▲ 22/20/16
Appearance	scalar	Visual*	NORML	▲ **WGOIL**	NORML	▲ LAYRD
Emulsified Water	scalar	Visual*	>0.05	▲ **.5%**	NEG	▲ 1%

Customer Id: HUSBOLED
Sample No.: WC0887638
Lab Number: 02602294
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Water Drain-off	---	---	?	We advise that you follow the water drain-off procedure for this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Water Access	---	---	?	We advise that you check for the source of water entry.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.
Filter Fluid	---	---	?	We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil.

HISTORICAL DIAGNOSIS

NORMAL

10 Jul 2023 Diag: Wes Davis

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

WATER

05 Dec 2022 Diag: Kevin Marson

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. ppm Water and water and water and water and water contamination levels are severe. Oil Cleanliness are abnormally high. Particles >14µm are abnormally high. Particles >4µm are abnormally high. Particles >6µm are abnormally high. There is a high concentration of water present in the oil. Excessive free water present. The white residue present in the sample is oil additive precipitate. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

ISO

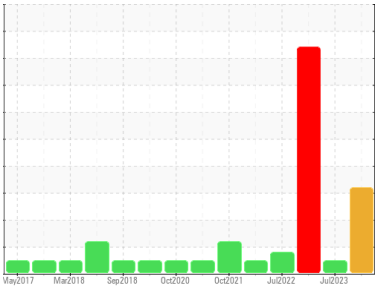
18 Jul 2022 Diag: Wes Davis

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Machine Id
Studer S31 Universal Grinder # 526 (Neck Ring) - cc4032
Component
Hydraulic System
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We advise that you follow the water drain-off procedure for this component. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0887638**	WC0837833	WC0768386
Sample Date		Client Info		**10 Dec 2023**	10 Jul 2023	05 Dec 2022
Machine Age	days	Client Info		**0**	0	0
Oil Age	days	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**4**	9	12
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**0**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**<1**	0	1
Copper	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>20	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

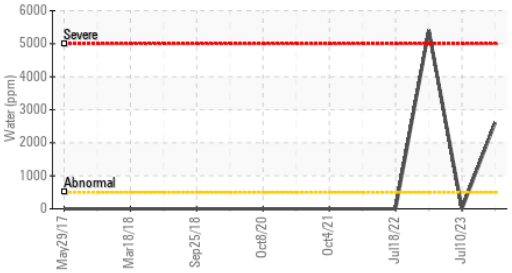
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**2**	<1	5
Barium	ppm	ASTM D5185(m)		**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	<1
Magnesium	ppm	ASTM D5185(m)		**<1**	<1	0
Calcium	ppm	ASTM D5185(m)		**1**	3	2
Phosphorus	ppm	ASTM D5185(m)		**49**	56	80
Zinc	ppm	ASTM D5185(m)		**24**	52	100
Sulfur	ppm	ASTM D5185(m)		**3027**	3513	3502
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**<1**	<1	<1
Sodium	ppm	ASTM D5185(m)		**<1**	<1	2
Potassium	ppm	ASTM D5185(m)	>20	**0**	<1	1
Water	%	ASTM D6304*	>0.05	▲ **0.260**	---	⬢ 0.540
ppm Water	ppm	ASTM D6304*	>500	▲ **2603**	---	⬢ 5400.3

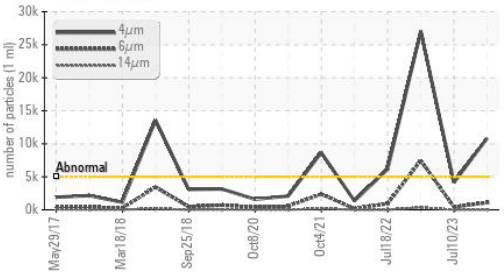
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **10834**	4139	▲ 27035
Particles >6µm		ASTM D7647	>1300	**1097**	434	▲ 7461
Particles >14µm		ASTM D7647	>160	**20**	12	▲ 341
Particles >21µm		ASTM D7647	>40	**7**	3	34
Particles >38µm		ASTM D7647	>10	**3**	0	2
Particles >71µm		ASTM D7647	>3	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/17/11**	19/16/11	▲ 22/20/16

OIL ANALYSIS REPORT

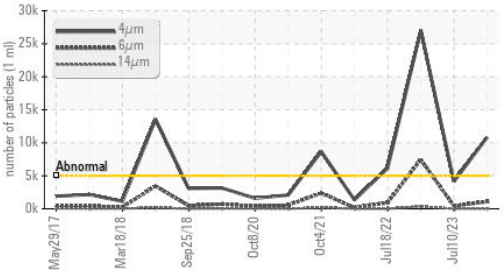
Water (KF)



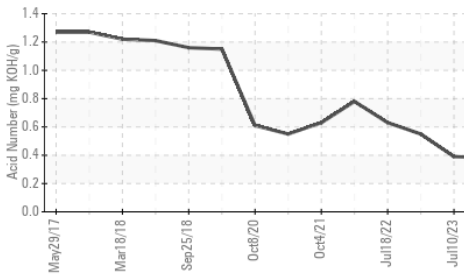
Particle Trend



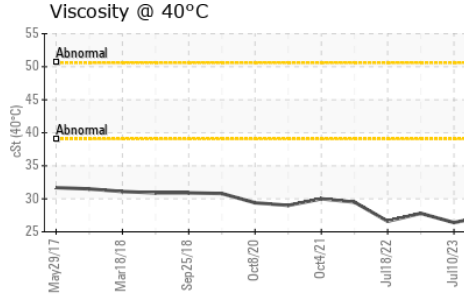
Particle Trend



Acid Number



Viscosity @ 40°C

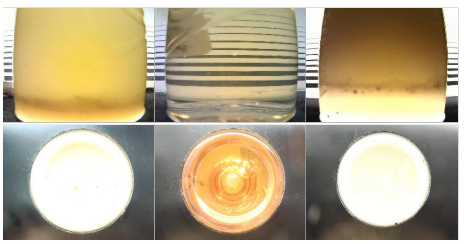


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.38**	0.39	0.55

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	▲ MODER
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	▲ **WGOIL**	NORML	▲ LAYRD
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	▲ **.5%**	NEG	▲ 1%
Free Water	scalar	Visual*		**NEG**	NEG	▲ >10%

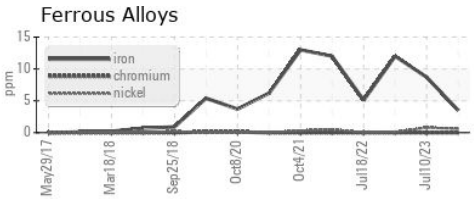
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)		**27.4**	26.4	27.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

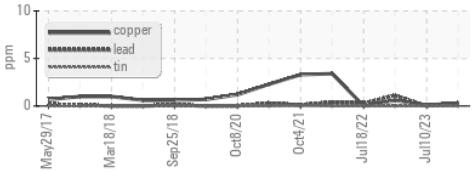


GRAPHS

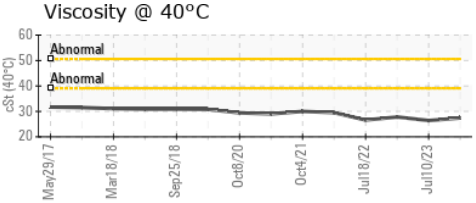
Ferrous Alloys



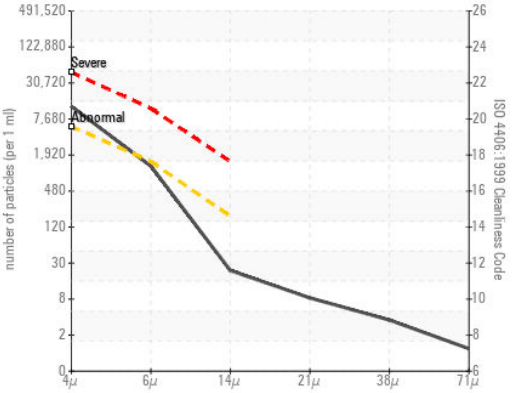
Non-ferrous Metals



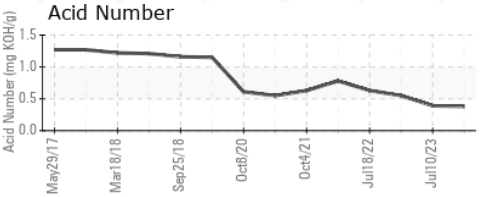
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **HUSKY INJECTION MOLDING SYSTEMS LTD**
Sample No. : WC0887638 **Received** : 11 Dec 2023
Lab Number : 02602294 **Diagnosed** : 12 Dec 2023
Unique Number : 5695379 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KF)

530 QUEEN STREET SOUTH
BOLTON, ON
CA L7E 5S5
Contact: Robert Cameron
rcameron@husky.ca
T: (905)951-5000
F: (905)951-5167

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.