

Account Information
Lab Customer ID#: 265366
Company Name: Road Machinery & Supplies Co
Company Worksite: Savage, MN
Company Address: 5633 West Hwy 13
Savage, MN, 55378

Unit Information
Unit ID: A32661
Unit Mfg: Komatsu
Unit Model: PC360LC-10
Unit Serial #: A32661
Unit Worksite: VOSS UTILITY

Sample Information
Lab No.: 202103191099
Sample Tracking #: S20210212041153
Sample Date: Mar 04, 2021
Received Date: Mar 19, 2021
Completed Date: Mar 23, 2021

Component Information
Cpnt. Description: SWING GEAR
Cpnt. Mfg: Komatsu
Cpnt. Model: PC360LC-10
Cpnt. Serial #: A32661
Cpnt. Type: SWING DRME

Other Sample Information
PO No.: ROAD MACH SAVAGE MN
Work Order No.:
Reference No.: 5631742
Filter Age: 0

Fluid Information
Fluid Manufacturer: KOMATSU
Fluid Brand/Product: POWER RAIN OIL TO-30
Fluid Grade: SAE 30

Maintenance Recommendations for Lab No.: 202103191099
Evaluated By: LaBraun Kennedy - Data Analyst
ANALYSIS INDICATES COMPONENT & LUBRICANT CONDITIONS ARE ACCEPTABLE. RESAMPLE at the next scheduled interval.

SPECTROCHEMICAL ANALYSIS PPM		Wear Metals										Contaminants			Additives							
LAB NO.	SAMPLE DRAWN	Iron	Chromium	Nickel	Aluminum	Lead	Copper	Tin	Silver	Titanium	Vanadium	Silicon	Sodium	Potassium	Boron	Molybdenum	Phosphorus	Zinc	Calcium	Barium	Magnesium	Antimony
1099	03/04/2021	30	<1	<1	6	<1	4	<1	<0.1	<1	<1	11	1	2	4	1	846	1149	4276	<1	12	<1
0510	08/05/2014	40	1	<1	1	1	3	<1	<0.1	2	<1	8	3	<10	20	7	946	1118	3370	<10	10	<30
1091	12/30/2013	50	1	<1	<1	2	2	<1	<0.1	2	<1	10	3	<10	23	7	1149	1374	4265	<10	14	<30
0636	08/12/2013	87	2	<1	2	1	6	<1	<0.1	<1	<1	19	2	<10	2	<5	847	983	4246	<10	14	<30
1614	01/31/2013	63	1	1	5	<1	4	<1	<0.1	<1	<1	20	9	<10	1	<5	810	952	4136	<10	13	<30

SAMPLE INFORMATION							FLUID PROPERTIES/CONTAMINANTS			PQ	Wk-Order
LAB NO.	SAMPLE DRAWN	UNIT TIME	FLUID TIME	UOM	FILTER CHG.	LUBE SERVICE	Water	D7279 Vis 100 °C	PQ Index	Number	
1099	03/04/2021	8777		HR	No	S	<0.1	10.7	9		
0510	08/05/2014	1918	836	HR	No	C	<0.1	10.6		W17676	
1091	12/30/2013	1449	367	HR	No	S	<0.1	10.9			
0636	08/12/2013		1087	HR	No	N	<0.1	11.3		8781	
1614	01/31/2013	440		HR	No	S	<0.1	11.3		7977	

KEY: UoM - Unit of Measure Y - Yes N - No C - Changed S - Sampled > - Greater Than < - Less Than N/R - Not Reported (M) - Modified Method

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Testing performed by Bureau Veritas, an ISO/IEC 17025:2017 accredited laboratory by ANAB. Certificate and scope of accredited methods can be found at <https://oil-testing.com/iso-17025-quality-program/>. †: Not in scope of accreditation. For further details on outsourced testing, contact the laboratory directly. For a list of tests and associated methodologies, refer to <http://www.bureauveritas.com/oil-analysis>.

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Unit Information

Unit ID: A32661
 Unit Mfg: Komatsu
 Unit Model: PC360LC-10
 Unit Serial#: A32661
 Unit Worksite: VOSS UTILITY

Sample Information

Lab No.: 202103191086
 Sample Tracking #: S20210212034845
 Sample Date: Mar 10, 2021
 Received Date: Mar 19, 2021
 Completed Date: Mar 23, 2021

Component Information

Cpnt. Description: LEFT FINAL DRIVE
 Cpnt. Mfg: Komatsu
 Cpnt. Model: PC360LC-10
 Cpnt. Serial#: A32661
 Cpnt. Type: FINAL DRME

Other Sample Information

PO No.: ROAD MACH SAVAGE MN
 Work Order No.:
 Reference No.: 5631741
 Filter Age: 0

Fluid Information

Fluid Manufacturer: KOMATSU
 Fluid Brand/Product: POWER RAIN OIL TO-30
 Fluid Grade: SAE 30

Maintenance Recommendations for Lab No.: 202103191086

Evaluated By: LaBraun Kennedy - Data Analyst

ANALYSIS INDICATES COMPONENT & LUBRICANT CONDITIONS ARE ACCEPTABLE. RESAMPLE at the next scheduled interval.

LAB NO.	SAMPLE DRAWN	Iron	Chromium	Nickel	Aluminum	Lead	Copper	Tin	Silver	Titanium	Vanadium	Silicon	Sodium	Potassium	Boron	Molybdenum	Phosphorus	Zinc	Calcium	Barium	Magnesium	Antimony
1086	03/10/2021	56	1	1	9	37	8	2	<0.1	<1	<1	8	4	4	26	65	996	1318	2228	<1	320	<1
0508	08/05/2014	151	1	<1	3	1	1	<1	<0.1	<1	<1	29	2	<10	3	<5	895	1110	3965	<10	12	<30
1090	12/30/2013	2619 *	34 *	3	39	<1	29	<1	<0.1	5	3	423 *	7	<10	2	8	849	1120	4551	28	48	<30
0635	08/12/2013	1286 *	20	2	27	1	21	<1	<0.1	3	1	222 *	3	<10	1	7	794	1033	4219	22	21	<30
1613	01/31/2013	187	4	2	9	1	4	<1	0.2	1	1	47	9	<10	3	<5	769	913	4014	12	9	<30

SAMPLE INFORMATION							FLUID PROPERTIES/CONTAMINANTS			PQ Index		Wk-Order Number
LAB NO.	SAMPLE DRAWN	UNIT TIME	FLUID TIME	UOM	FILTER CHG.	LUBE SERVICE	Water	D7279 Vis 100 °C	PQ Index		Wk-Order Number	
1086	03/10/2021	8777		HR	No	S	<0.1	10.7	92			
0508	08/05/2014	1918	1918	HR	No	C	<0.1	11.0			W17676	
1090	12/30/2013	1449	1449	HR	No	S	0.5 *	11.4				
0635	08/12/2013		1087	HR	No	N	<0.1	11.2			8781	
1613	01/31/2013	440		HR	No	S	<0.1	11.3			7977	

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Status: **ABNORMAL**

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Savage, MN, 55378

Unit Information

Unit ID: A32661
Unit Mfg: Komatsu
Unit Model: PC360LC-10
Unit Serial #: A32661
Unit Worksite: VOSS UTILITY

Sample Information

Lab No.: 202103191085
Sample Tracking #: S20210212023159
Sample Date: Mar 10, 2021
Received Date: Mar 19, 2021
Completed Date: Mar 23, 2021

Component Information

Cpnt. Description: RIGHT FINAL DRIVE
Cpnt. Mfg: Komatsu
Cpnt. Model: PC360LC-10
Cpnt. Serial #: A32661
Cpnt. Type: FINAL DRIVE

Other Sample Information

PO No.: ROAD MACH SAVAGE MN
Work Order No.:
Reference No.: 5631740
Filter Age: 0

Fluid Information

Fluid Manufacturer: KOMATSU
Fluid Brand/Product: POWERTRAIN OIL TO-30
Fluid Grade: SAE 30

Maintenance Recommendations for Lab No.: 202103191085

Evaluated By: **LaBraun Kennedy - Data Analyst**

ANALYSIS INDICATES CONTAMINATION IS PRESENT! ABRASIVES-DIRT present. The wear level appears acceptable. CHANGE the OIL (and FILTER if applicable). CHECK for the source of contaminant entry, Resample at the next scheduled interval.

SPECTROCHEMICAL ANALYSIS PPM		Wear Metals										Contaminants			Additives							
LAB NO.	SAMPLE DRAWN	Iron	Chromium	Nickel	Aluminum	Lead	Copper	Tin	Silver	Titanium	Vanadium	Silicon	Sodium	Potassium	Boron	Molybdenum	Phosphorus	Zinc	Calcium	Barium	Magnesium	Antimony
1085	03/10/2021	182	2	<1	22	<1	1	<1	<0.1	1	<1	105 *	3	6	5	3	876	1184	4375	3	21	<1
0509	08/05/2014	287	2	<1	4	<1	1	<1	<0.1	<1	<1	39	2	<10	4	<5	932	1116	4063	<10	15	<30
1089	12/30/2013	2319 *	25 *	3	31	2	22	<1	1.8	6	2	438 *	7	<10	4	<5	806	1092	4794	25	54	<30
0634	08/12/2013	1153 *	15	2	21	1	16	1	<0.1	2	1	263 *	3	<10	1	<5	810	991	4216	13	28	<30
1612	01/31/2013	236	4	1	12	<1	1	<1	<0.1	1	<1	66	11	<10	2	<5	851	989	4348	11	12	<30

SAMPLE INFORMATION							FLUID PROPERTIES/CONTAMINANTS			
LAB NO.	SAMPLE DRAWN	UNIT TIME	FLUID TIME	UOM	FILTER CHG.	LUBE SERVICE	Water	D7279 Vis 100 °C	PQ Index	Wk-Order Number
1085	03/10/2021	8777		HR	No	S	<0.1	10.6	128	
0509	08/05/2014	1918	1918	HR	No	C	<0.1	11.0		W17676
1089	12/30/2013	1449	1449	HR	No	S	0.5 *	11.4		
0634	08/12/2013		1087	HR	No	N	<0.1	11.3		8781
1612	01/31/2013	440		HR	No	S	<0.1	11.2		7977

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Unit Information
 Unit ID: [A32661](#)
 Unit Mfg: Komatsu
 Unit Model: PC360LC-10
 Unit Serial #: A32661
 Unit Worksite: VOSS UTILITY

Sample Information
 Lab No.: 202103191084
 Sample Tracking #: S20210212032043
 Sample Date: Mar 10, 2021
 Received Date: Mar 19, 2021
 Completed Date: Mar 23, 2021

Component Information
 Cpt. Description: [HYDRAULIC](#)
 Cpt. Mfg: Komatsu
 Cpt. Model: PC360LC-10
 Cpt. Serial #: A32661
 Cpt. Type: HYDRAULIC

Other Sample Information
 PO No.: ROAD MACH SAVAGE MN
 Work Order No.:
 Reference No.: 5631739
 Filter Age: 0

Fluid Information
 Fluid Manufacturer: UNKNOWN
 Fluid Brand/Product: UNKNOWN
 Fluid Grade: N/A

Maintenance Recommendations for Lab No.: 202103191084

Evaluated By: LaBraun Kennedy - Data Analyst

ANALYSIS INDICATES COMPONENT & LUBRICANT CONDITIONS ARE ACCEPTABLE. RESAMPLE at the next scheduled interval.

SPECTROCHEMICAL ANALYSIS PPM		Wear Metals										Contaminants			Additives							
LAB NO.	SAMPLE DRAWN	Iron	Chromium	Nickel	Aluminum	Lead	Copper	Tin	Silver	Titanium	Vanadium	Silicon	Sodium	Potassium	Boron	Molybdenum	Phosphorus	Zinc	Calcium	Barium	Magnesium	Antimony
1084	03/10/2021	329	5	<1	79	<1	3	<1	<0.1	3	1	414	12	24	6	3	845	1146	4158	1	32	<1
0507	08/05/2014	13	3	<1	2	2	8	<1	<0.1	<1	<1	7	3	<10	1	<5	497	622	1311	<10	20	<30
1088	12/30/2013	16	2	<1	1	1	8	<1	<0.1	<1	<1	11	2	<10	2	<5	592	736	1618	<10	24	<30
0633	08/12/2013	10	1	<1	1	3	7	<1	<0.1	<1	<1	8	<1	<10	2	<5	574	716	1588	<10	23	<30
1611	01/31/2013	5	<1	1	2	1	4	<1	0.1	<1	<1	8	4	<10	2	<5	544	691	1556	<10	21	<30

SAMPLE INFORMATION							FLUID PROPERTIES/CONTAMINANTS									
LAB NO.	SAMPLE DRAWN	UNIT TIME	FLUID TIME	UOM	FILTER CHG.	LUBE SERVICE	Water	D7279 Vis 100 °C	Particles >4µm	Particles >6µm	Particles >14µm	Particles >21µm	Particles >38µm	Particles >70µm	ISO Code	Wk-Order Number
1084	03/10/2021	8777		HR	No	S	<0.1	7.0	42344	347	22	5	<1	<1	23/16/12	
0507	08/05/2014	1918	1918	HR	No	S	<0.1	8.3								W17676
1088	12/30/2013	1449	1449	HR	No	S	<0.1	8.3								
0633	08/12/2013	1087	1087	HR	No	N	<0.1	8.6								8781
1611	01/31/2013	440		HR	No	S	<0.1	9.1								7977

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