

DHS 769

Equipment: 001013685354
 Make-Model: KOMATSU PC350
 Type: EXCAVATOR
 Serial Number:

Unit Number Customer No.

5354HS

HYD SYST (LPD)

SAE Grade: 10W

Fuel: DI

Sales Rep:

Sample Information					
Test Date	Sample Date	Sample Num	Total Hours / Miles	Hours / Miles This Sample	C / S
8/23/2019	8/8/2019	082319163	9952	0	Chng
10/31/2017	10/14/2017	103117128	12037	0	Chng
4/26/2016	4/15/2016	042616168	7490	0	Chng
3/20/2015	3/16/2015	032015161	5384	0	Chng
10/22/2013	10/11/2013	102213252	3988	0	Chng

Physical Data			
Viscosity	Glycol	Fuel	Water
NEG	NEG	NEG	NEG
NEG	NEG	NEG	NEG
NEG	NEG	NEG	NEG
NEG	NEG	NEG	NEG
NEG	NEG	NEG	NEG

Wear Metal Concentrations in Parts Per Million (ppm) by Weight										
Lead	Iron	Silica	Chromium	Tin	Aluminum	Copper	Sodium	Potassium		
0A	20A	8A	0A	0A	2A	3A	4	1		
2A	21A	9A	0A	0A	2A	3A	8	0		
1A	60X	9A	0A	0A	3A	5A	10	0		
0A	23A	11A	0A	2A	2A	4A	10	1		
1A	34C	13A	0A	0A	2A	7A	4	1		

Sample Information			Chemical Data		
Test Date	Sample Date	Sample Num	TBN	Soot	Ox
8/23/2019	8/8/2019	082319163			
10/31/2017	10/14/2017	103117128			
4/26/2016	4/15/2016	042616168			
3/20/2015	3/16/2015	032015161			
10/22/2013	10/11/2013	102213252			

Additive Metals in ppm			
Ca	P	Zn	Mg

Particle Counts Per Particle Size									ISO
4Um	6Um	10Um	14Um	21Um	25Um	50Um	70Um	Code	
50918	9572	92	18	4	3	0	0	23/20 17	
56358	3891	130	37	6	2	0	0	23/19 17	
32600	1252	20	24	16	49	36	41	22/18 16	
31562	3844	797	535	245	173	128	175	22/20 17	
46683	2473	159	59	8	1	0	0	23/19 17	

Sample Num	RECOMMENDATIONS
082319163	ALL TESTS APPEAR NORMAL FOR THIS SAMPLE.
103117128	ALL TESTS APPEAR NORMAL FOR THIS SAMPLE.
042616168	NOTIFIED OF EXCESSIVE IRON. POSSIBLE PUMP HOUSING WEAR. CONTINUE TO SAMPLE TO MONITOR IRON LEVEL AND WEAR TREND.
032015161	ALL TESTS APPEAR NORMAL FOR THIS SAMPLE.
102213252	IRON IS HIGH. POSSIBLE CYLINDER BORE WEAR. CONTINUE TO SAMPLE TO MONITOR IRON LEVEL AND WEAR TREND.

Rating
A No action Required
C Review complete analysis, monitor engine or component parameters
X Review complete analysis, examine engine or component parameters, Resample immediately

A-NORMAL

C-WARNING

X-CRITICAL

NEG-NEGATIVE

TR-TRACE

POS-POSITIVE

Equipment: 001013685354
 Make-Model: KOMATSU PC350
 Type: EXCAVATOR
 Serial Number:

Unit Number: S354E
 Customer No.:
 ENGINE (SOOT)
 SAE Grade: 15W40
 Fuel: DI
 Sales Rep:

Sample Information					
Test Date	Sample Date	Sample Num	Total Hours / Miles	Hours / Miles This Sample	C / S
4/5/2019	3/21/2019	040519044	9870	0	Chng
11/9/2018	11/6/2018	110918042	9700	0	Chng
9/14/2018	9/10/2018	091418090	9585	0	Chng
5/18/2018	5/10/2018	051818064	9340	0	Chng
11/6/2017	10/30/2017	110617079	9029	0	Chng

Physical Data			
Viscosity	Glycol	Fuel	Water
14.5	NEG	NEG	NEG
14.2	NEG	NEG	NEG
14.3	NEG	NEG	NEG
14.7	NEG	NEG	NEG
13.9	NEG	NEG	NEG

Wear Metal Concentrations in Parts Per Million (ppm) by Weight									
Lead	Iron	Silica	Chromium	Tin	Aluminum	Copper	Sodium	Potassium	
0A	6A	3A	0A	0A	3A	2A	4	0	
1A	3A	2A	0A	1A	2A	0A	9	0	
1A	9A	3A	0A	0A	2A	1A	1	0	
4A	8A	2A	1A	4A	2A	1A	5	0	
1A	7A	3A	0A	0A	4A	1A	19	0	

Sample Information			Chemical Data		
Test Date	Sample Date	Sample Num	TBN	Soot	Ox
4/5/2019	3/21/2019	040519044		2.10	
11/9/2018	11/6/2018	110918042		1.00	
9/14/2018	9/10/2018	091418090		1.30	
5/18/2018	5/10/2018	051818064		0.20	
11/6/2017	10/30/2017	110617079		0.00	

Additive Metals in ppm			
Ca	P	Zn	Mq

Particle Counts Per Particle Size								ISO Code
4Um	6Um	10Um	14Um	21Um	25Um	50Um	70Um	

Sample Num	RECOMMENDATIONS
040519044	ALL TESTS APPEAR NORMAL FOR THIS SAMPLE.
110918042	ALL TESTS APPEAR NORMAL FOR THIS SAMPLE.
091418090	ALL TESTS APPEAR NORMAL FOR THIS SAMPLE.
051818064	ALL TESTS APPEAR NORMAL FOR THIS SAMPLE.
110617079	ALL TESTS APPEAR NORMAL FOR THIS SAMPLE.

Rating
A No action Required
C Review complete analysis, monitor engine or component parameters
X Review complete analysis, examine engine or component parameters, Resample immediately

A-NORMAL

C-WARNING

X-CRITICAL

NEG-NEGATIVE

TR-TRACE

POS-POSITIVE

Clarkson Construction Company
Work Order Sheet

Repair Accomplished By _____

Equipment Number

5354

Date

8 / 7 / 18

Hours on Machine

9490

Job Number

800

Miles on Machine

P.O Number

Component Number (Circle)

708 Accident/Vandalism

710 New GPS installation

711 GPS Repairs

720 Electrical Motor/Starter Repair/Monitor/Replace

721 Electrical Component/ Alternator Repair/Replace

722 Battery Replacement

723 Electrical Misc Repair

730 Engine Overhaul/Replacement

732 Engine Component Repair/Replacement

734 Engine Misc Repair

740 Transmission Overhaul/Replacement

742 Transmission Component Repair/Replacement

744 Transmission Misc Repair

750 Crawler Track Repair/Replacement

751 Bottom Track Rollers Repair/Replacement

752 Undercarriage Misc Repair

755 Conveyor Belt Repair/Replacement

756 Conveyor Component Repair/Replacement

757 Conveyor Flashing Repair/Replacement

760 Tire Replacement

762 Tire Repair

770 Differential Repair/Replacement

774 Final Drive Misc Repair

777 Brake System Component Replacement

778 Bearings/Wheel Seals/Hub Caps Repair/Replace

780 Hydraulic Pump Repair/Replacement

782 Hydraulic Cylinder Repair/Replacement

786 Hydraulic Motor Repair/Replacement

787 Hydraulic Misc. Repair/Replacement

789 A/C Dryer/Filters/Lines Replacement

790 Air Conditioner Compressor Repair/Replacement

791 Air Compressor Overhaul/Replacement

792 Air System Misc Repair

793 Power Steering Pump/Gear Box/ Steering Comp

794 Machine/Vehicle Body/Bowl Repair

795 Cutting Edge/Teeth Repair/Replacement

796 Attachment Repair

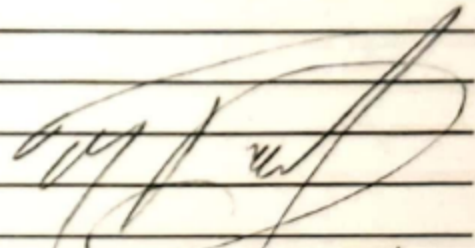
797 DOT Inspection

798 Misc Machine Repair

Description of Work Done

750. Installed new Track Rails.
From Van Keppel

~~Replaced~~


8-7-18
TROY Drannen

PO-35753

CUSTOMER NO

PAGE NO

1

CUSTOMER PO

PARTS INVOICE

INVOICE TO:

SHIP TO:

Check Number :

Order taken by :

SALESMAN 1

ORDER NO PS0140414 DELIVERY TERMS:

SHIP VIA LTL

POS.	SHIP	B/O	PART NUMBER / Lot ID	DESCRIPTION	WRH	PRICE	TOTAL
1	2	0	KM2233/49 Mfg Code USE	RAIL AS	10700		
2	384	0	HT529 Mfg Code USE	BOLT- TRACK	10700		
3	384	0	79035320 Mfg Code USE	NUT	10700		

CUSTOMER NO

PAGE NO

2

CUSTOMER PO

PARTS INVOICE

POS. SHIP	B/C	PART NUMBER / Lot ID	DESCRIPTION	WRH	PRICE	TOTAL
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SALES TAX DETAILS

AXYM	- MISSOURI	:
AYSD	- JACKSON CO-MISSOURI	:
AYSO	- KANSAS CITY-JACKSON CO-MISSOURI	:

PARTS

MISC CHARGES

SUBTOTAL
SALES TAX

INVOICE TOTAL (USD)

5,747.81

ACCEPTANCE: _____

DATE: _____

Ship to:

Invoice to:

Branch			
Kansas City, KS			
Date	Time	Page	
03/20/18	22:34:28 (B)	01	
Account No.	Phone No.	Invoice No.	
CLARK005			
Ship Via	Purchase Order		
PARTS 3/13/18			
Sales Tax No.			
		Salesperson	

SERVICE INVOICE

STK#/FLEET#		HRS	PIN/EIN	WARRANTY DATE	HRS
51173	PC350LC-8 HYDRAULI	9045	A10119	08/12/11	8700 S1
	EXC		SAA6D114E-3 73080744		

SEGMENT# 1 C JLY NA 02/22/18 02/23/18

50 POINT INSPECTION

CORRECTION:

COMPLETED A 50 POINT INSPECTION.

10355001

LABOR

SEGMENT TOTAL==>

SEGMENT# 2 C JMT NA 02/22/18 02/23/18

REPLACE BOTH TRACK ADJUSTERS RECOIL SPRINGS

CAUSE:

BOTH RECOIL SPRINGS WERE BROKEN

CORRECTION:

BROUGHT THE MACHINE INTO THE SHOP AND LIFTED IT UP. LINED UP THE TRACKS TO REMOVE THE MASTER PINS. FOUND THE RIGHT MASTER LINK WAS WELDED TO THE RAIL. CLEANED AND REMOVED THE TRACK PADS FOR ACCESS. REMOVED THE TRACK ADJUSTER FITTINGS AND USED AN ASSISTANT TO COLLAPSE THE TRACK ADJUSTERS WITH THE FINAL DRIVES. THE TRACK PAD BOLTS WOULD NOT COME LOOSE WITH THE IMPACT. REMOVED THE BOLTS AND PADS. PRESSED OUT THE LEFT MASTER PIN AND TRIED TO REMOVED THE IDLER ASSEMBLY. IT WOULD NOT COME OUT OF THE CARRIER. FOUND THE TRACK ADJUSTER SPRING BROKEN AND CAUGHT ON THE INSIDE OF THE CARRIER. MOVED OVER TO THE RIGHT SIDE AND PRESSED OUT THE RIGHT PIN. REMOVED THE RIGHT TRACK ADJUSTER AND DISASSEMBLED. FOUND THE ADJUSTER SPRING BROKEN ON THIS SIDE AS WELL. CLEANED ALL SURFACES AND REPLACED THE SEALS. CREATED AN ESTIMATE FOR REPAIRS, THE

CONTINUED ON PAGE 02

Ship to:

Invoice to:

Branch

Kansas City, KS

Date

Time

Page

03/20/18

22:34:28 (B)

02

Account No.

Phone No.

Invoice No.

841057

Ship via

Purchase Order

PARTS 3/13/18

Sales Tax No.

Salesperson

SERVICE INVOICE

STK#/FLEET#

51173

PC350LC-8 HYDRAULI

HRS PIN/EIN

9045 A10119

WARRANTY DATE

08/12/11

HRS

8700 S1

EXC

SAA6D114E-3 73080744

NEW ESTIMATE WAS APPROVED. ORDERED PARTS. REMOVED THE LEFT
BROKEN SPRING. CLEANED ALL COMPONENTS. REMOVED THE
ADJUSTER SLEEVE SEAL AND HONED THE ASSEMBLY. THE ADJUSTER
SPRING SPACER WAS DAMAGED. REPAIRED THE SPACER. CLEANED
BOTH BARRELS, SPACERS, IDLER, TRACK PADS, RAIL, AND ALL
SURFACES TO PREP FOR REASSEMBLY. REPLACED THE DUST SEALS
IN EACH SIDE OF THE RAIL. ASSEMBLED BOTH TRACK ADJUSTERS
WITH NEW SPRINGS. INSTALLED A NEW RETAINER NUT ON ONE
SIDE. INSTALLED THE RETAINER PLATES, HAD TO RETHREAD ONE.
INSTALLED BOTH IDLERS. PINNED THE TRACKS BACK TOGETHER AND
REINSTALLED THE TRACK PADS WITH NEW BOLTS AND NUTS.
TORQUED TO SPEC AND GREASED THE TRACKS AND MACHINE. MOVED
THE MACHINE OUTSIDE AND TEST RAN. PARKED THE MACHINE AND
CLEANED UP WORK AREA.

FRTIN

INBOUND FRT

2

SUBLETL

CHASE THREADS

1

01310-21216

SCREW

2

04064-06525

SNAP RIN

2

07155-00925

WEAR RIN

2 O

07959-20001

VALVE

2

09370-00090

PACKING

2 O

207-30-54160

SEAL

3

207-30-74142

SPRING

2 N

207-32-05061

BOLT KIT, SH

1 O

207-32-61190

PIN, MAS

2

207-32-61260

SEAL

4

208-30-11760

NUT

2 N

CONTI

1001

Ship to:

Invoice to:

Branch		
Kansas City, KS		
Date	Time	Page
03/20/18	22:34:28 (B)	03
Account No.	Phone No.	Invoice No.
		S41057
Ship Via	Purchase Order	
PARTS 3/13/18		
Sales Tax No.		
		Salesperson

SERVICE INVOICE

STK#/FLEET#		HRS	PIN/EIN	WARRANTY DATE	HRS
51173	PC350LC-8 HYDRAULI	9045	A10119	08/12/11	8700 S1
	EXC		SAA6D114E-3 73080744		
10355001				SEGMENT TOTAL==>	

***** WORK ORDER TOTALS *****

PARTS	
LABOR	
SUBLET	
Shop Supplies	
Waste Disposal	
SUB TOTAL==>	
KANSAS ST WYANDOT CO	
Total Charge	10630.66