



OIL ANALYSIS REPORT

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**Store 3 - Norton**

Machine Id  
**HITACHI ZX250LC EX20 (S/N 1FFDCB70EEE430316)**

Component  
**Left Propel Gearbox**

Fluid  
**GEAR OIL SAE 90 (--- GAL)**

**RECOMMENDATION**

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

**WEAR**

Gear wear is indicated.

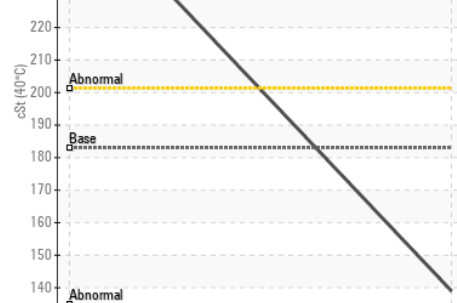
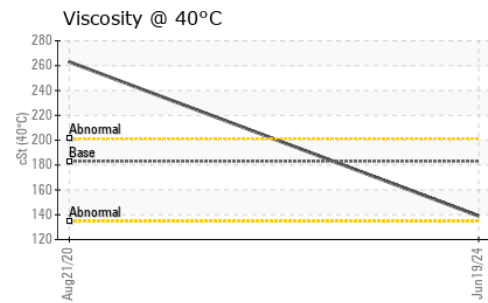
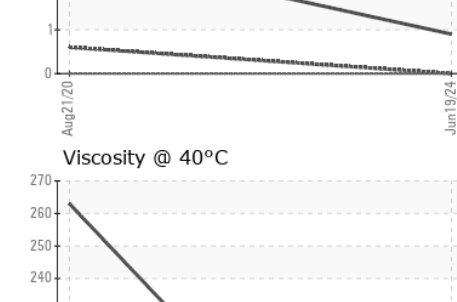
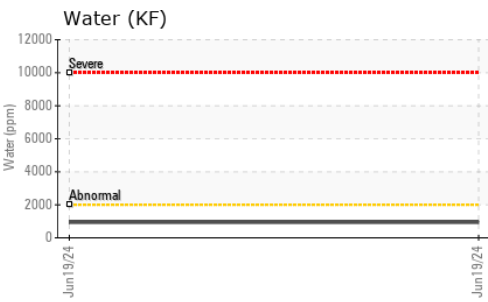
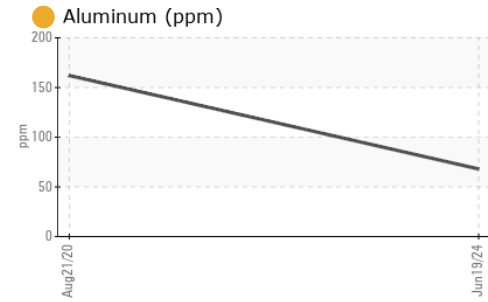
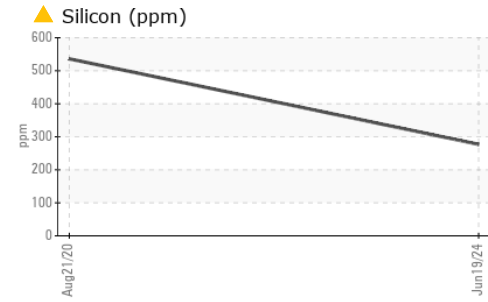
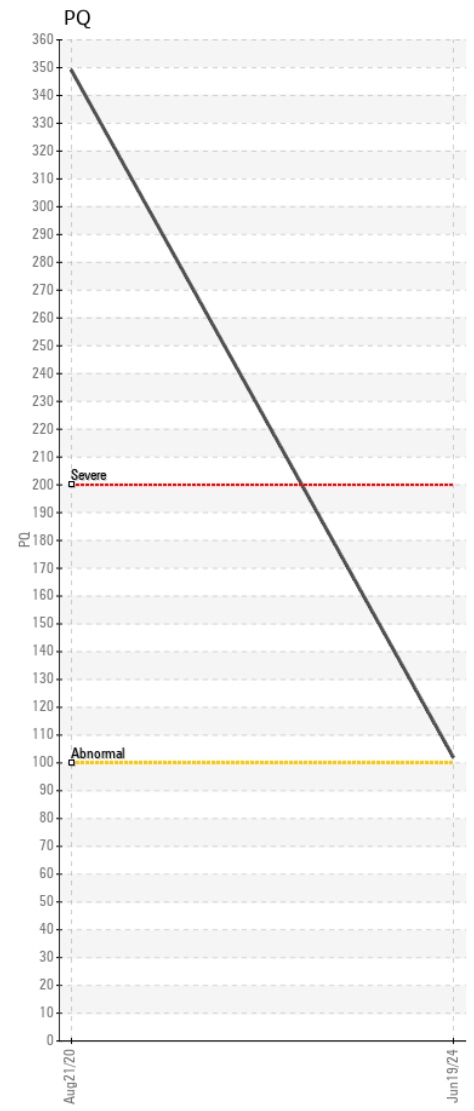
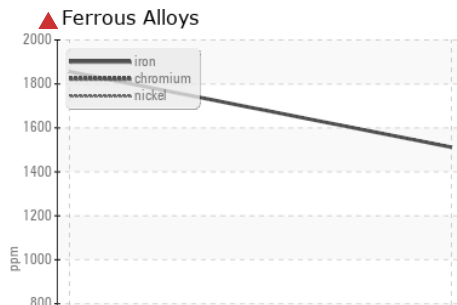
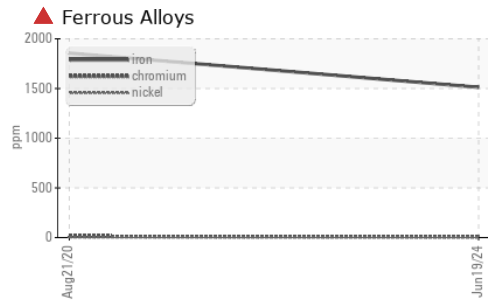
**CONTAMINATION**

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

**FLUID CONDITION**

The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LEC0049302</b>	LEC0014369	---
Sample Date		Client Info		<b>19 Jun 2024</b>	21 Aug 2020	---
Machine Age	hrs	Client Info		<b>8011</b>	6562	---
Oil Age	hrs	Client Info		<b>500</b>	300	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Not Changd</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	N/A	---
Sample Status				<b>SEVERE</b>	SEVERE	---
PQ		ASTM D8184		<b>102</b>	349	---
Iron	ppm	ASTM D5185m	>200	<b>▲ 1512</b>	▲ 1856	---
Chromium	ppm	ASTM D5185m	>10	<b>10</b>	▲ 12	---
Nickel	ppm	ASTM D5185m	>10	<b>2</b>	2	---
Titanium	ppm	ASTM D5185m		<b>5</b>	▲ 11	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m		<b>● 68</b>	● 162	---
Lead	ppm	ASTM D5185m		<b>0</b>	<1	---
Copper	ppm	ASTM D5185m		<b>&lt;1</b>	3	---
Tin	ppm	ASTM D5185m		<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	2	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	MODER	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Silicon	ppm	ASTM D5185m		<b>▲ 277</b>	▲ 536	---
Potassium	ppm	ASTM D5185m	>20	<b>18</b>	46	---
Water	%	ASTM D6304	>0.2	<b>0.094</b>	---	---
ppm Water	ppm	ASTM D6304	>2000	<b>940</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>0.2%</b>	NEG	---
Sodium	ppm	ASTM D5185m		<b>4</b>	7	---
Boron	ppm	ASTM D5185m	400	<b>115</b>	104	---
Barium	ppm	ASTM D5185m	200	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	12	<b>0</b>	0	---
Manganese	ppm	ASTM D5185m		<b>11</b>	12	---
Magnesium	ppm	ASTM D5185m	12	<b>9</b>	16	---
Calcium	ppm	ASTM D5185m	150	<b>56</b>	60	---
Phosphorus	ppm	ASTM D5185m	1650	<b>974</b>	840	---
Zinc	ppm	ASTM D5185m	125	<b>11</b>	11	---
Sulfur	ppm	ASTM D5185m	22500	<b>22551</b>	22571	---
Visc @ 40°C	cSt	ASTM D445	183	<b>139</b>	263	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0049302      **Received** : 03 Jul 2024  
**Lab Number** : 06227717      **Tested** : 06 Jul 2024  
**Unique Number** : 11111210      **Diagnosed** : 06 Jul 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: KF, PQ )

**LANE PIPELINE**  
 2946 E MAIN ST  
 BRIDGEPORT, WV  
 US 26330  
 Contact: JESSE WILBURN  
 jessewilburn@gmail.com  
 T: (740)440-0927  
 F:

Certificate L2367  
 To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)