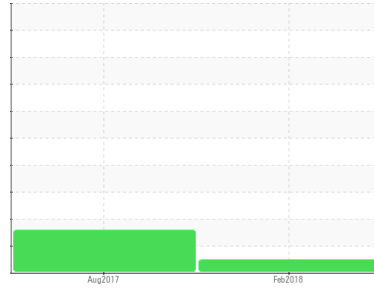




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
63
Machine Id
[63] A63 SPQ 1 Fire Pump
Component
Diesel Engine
Fluid
HIGH PERFORMANCE LUBRICANTS HDMO 5W30 (8 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			HPL005705	HPL006838	---
Sample Date	Client Info			01 Feb 2018	29 Aug 2017	---
Machine Age	hrs	Client Info		0	0	---
Oil Age	hrs	Client Info		6	12	---
Oil Changed	Client Info			N/A	N/A	---
Sample Status				NORMAL	MARGINAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	---
Glycol	WC Method			NEG	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	8	26	---
Chromium	ppm	ASTM D5185m	>20	<1	1	---
Nickel	ppm	ASTM D5185m	>2	<1	<1	---
Titanium	ppm	ASTM D5185m	>2	0	2	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>20	2	9	---
Lead	ppm	ASTM D5185m	>40	3	7	---
Copper	ppm	ASTM D5185m	>330	43	192	---
Tin	ppm	ASTM D5185m	>15	<1	2	---
Antimony	ppm	ASTM D5185m		0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		<1	<1	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	200	140	145	---
Barium	ppm	ASTM D5185m		<1	<1	---
Molybdenum	ppm	ASTM D5185m	85	77	68	---
Manganese	ppm	ASTM D5185m		2	8	---
Magnesium	ppm	ASTM D5185m	525	501	383	---
Calcium	ppm	ASTM D5185m	4300	3980	3235	---
Phosphorus	ppm	ASTM D5185m	1000	750	753	---
Zinc	ppm	ASTM D5185m	1100	788	827	---
Sulfur	ppm	ASTM D5185m	20200	15937	8026	---

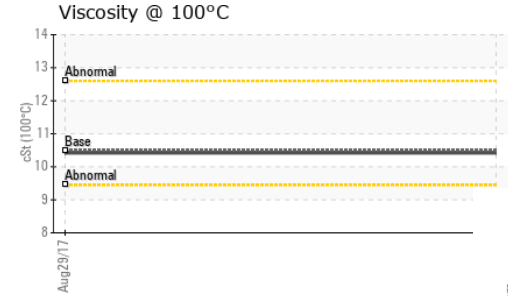
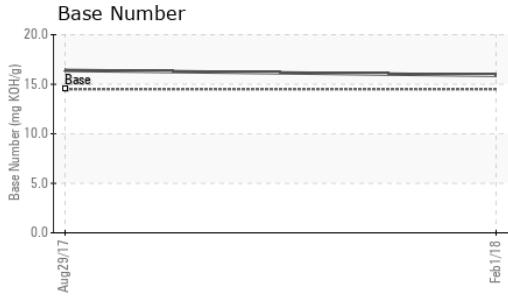
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	10	---
Sodium	ppm	ASTM D5185m		2	16	---
Potassium	ppm	ASTM D5185m	>20	1	3	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0	0	---
Nitration	Abs/cm	*ASTM D7624	>25	5.	6.	---
Sulfation	Abs/.1mm	*ASTM D7415	>35	22.	23.	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.	15.	---
Base Number (BN)	mg KOH/g	ASTM D2896	14.5	15.9	16.4	---



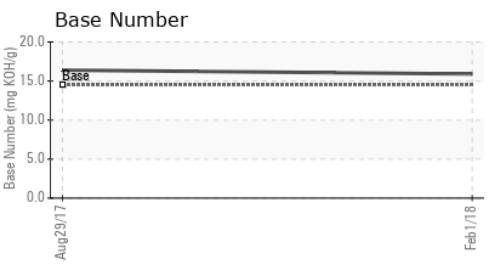
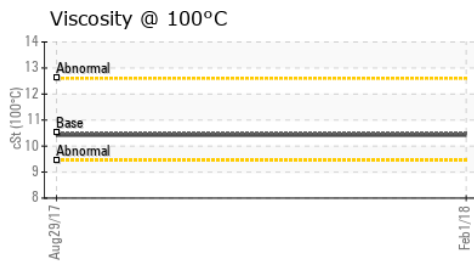
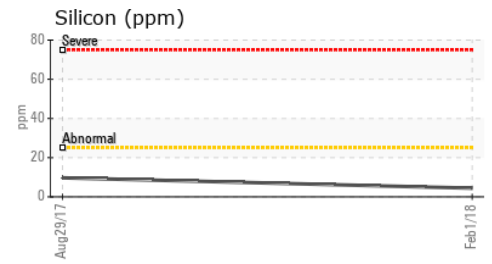
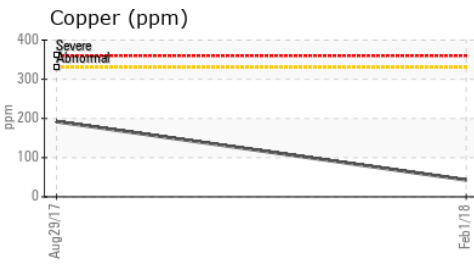
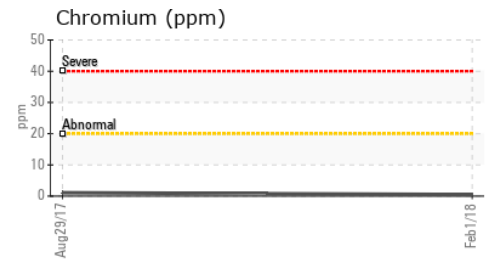
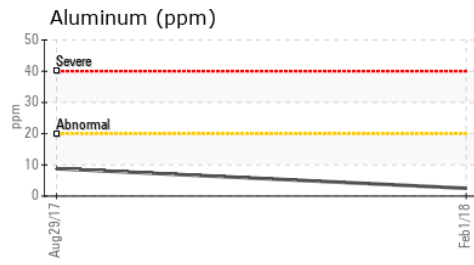
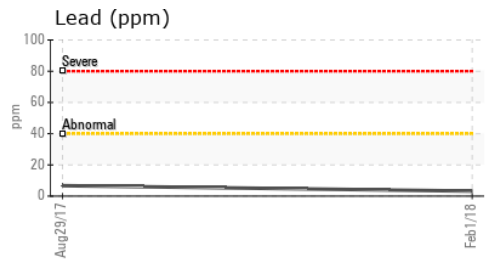
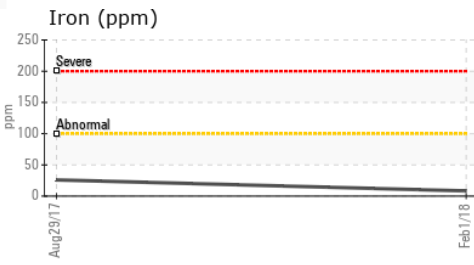
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	10.5	10.42	10.42	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HPL005705 **Received** : 23 Mar 2018
Lab Number : **04434329** **Diagnosed** : 23 Mar 2018
Unique Number : 8143072 **Diagnostician** : Wes Davis
Test Package : MOB 2

KENSING
 2525 S KENSINGTON RD
 KANKAKEE, IL
 US 60901
 Contact: TIM HUBERT
 timothy.hubert@kensingsolutions.com
 T: (815)939-8918
 F: x:

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)