



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PETERBILT 0389

Component
Diesel Engine

Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (11 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR03885235	TR03838476	TR03770350
Sample Date		Client Info		03 Dec 2015	23 Sep 2015	22 Jun 2015
Machine Age	mls	Client Info		1004903	0	1480000
Oil Age	mls	Client Info		20000	0	20000
Filter Age	mls	Client Info		10000	0	20000
Oil Changed		Client Info		Not Chngd	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	92	97	54
Chromium	ppm	ASTM D5185m	>6	1	1	3
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>30	4	3	6
Lead	ppm	ASTM D5185m	>10	3	4	8
Copper	ppm	ASTM D5185m	>150	5	6	4
Tin	ppm	ASTM D5185m	>4	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

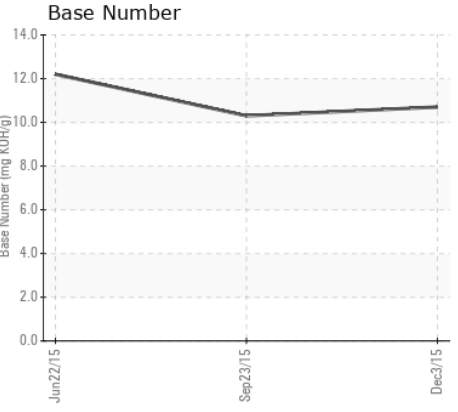
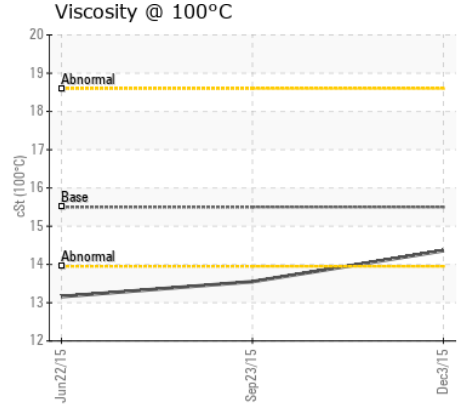
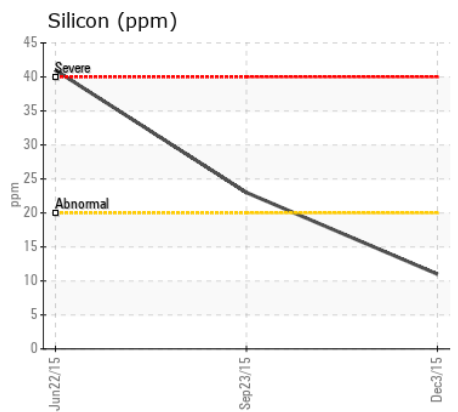
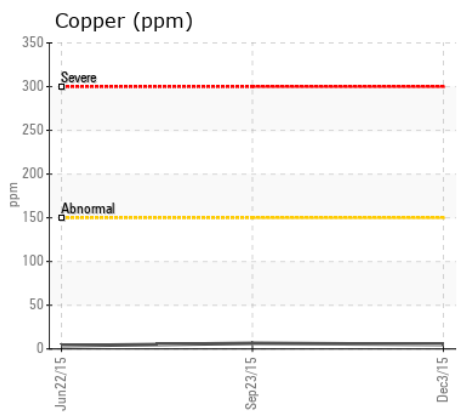
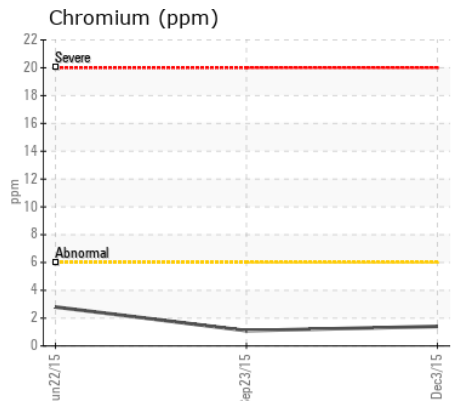
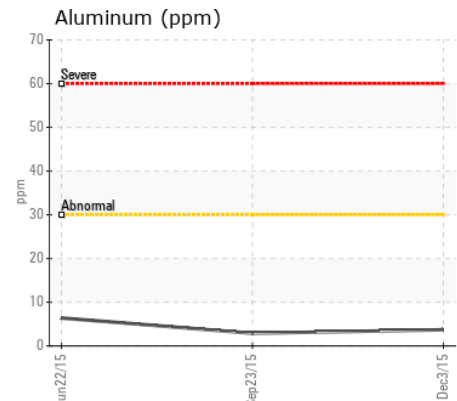
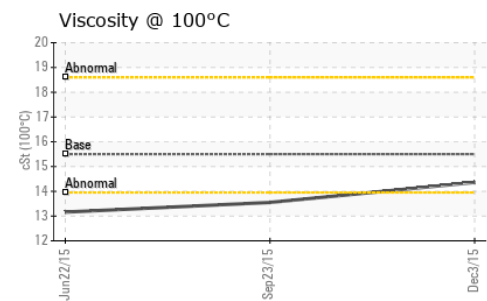
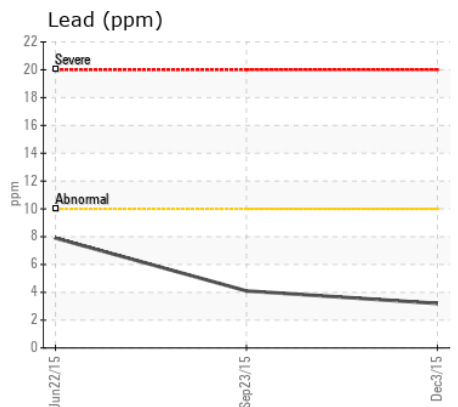
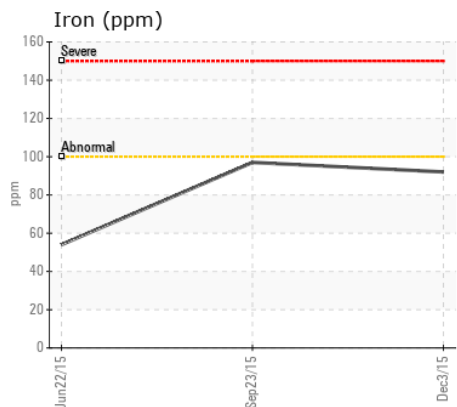
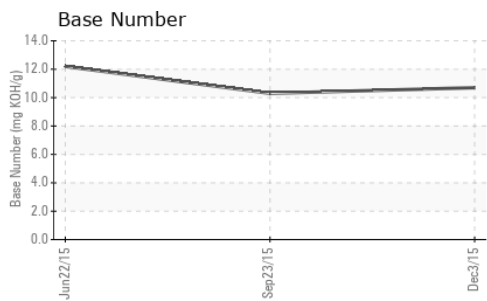
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m	>20	11	▲ 23	▲ 41
Potassium	ppm	ASTM D5185m	>20	0	1	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.1	0.4	0.2
Nitration	Abs/cm	*ASTM D7624		8.	8.	8.
Sulfation	Abs/.1mm	*ASTM D7415		26.	25.	22.
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	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m		5	6	6
Boron	ppm	ASTM D5185m		<1	0	7
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	2	8
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		26	28	50
Calcium	ppm	ASTM D5185m		3954	3661	4043
Phosphorus	ppm	ASTM D5185m		1080	943	1133
Zinc	ppm	ASTM D5185m		1264	1241	1310
Sulfur	ppm	ASTM D5185m		4280	3895	44
Oxidation	Abs/.1mm	*ASTM D7414		21.	22.	20.
Base Number (BN)	mg KOH/g	ASTM D2896		10.7	10.3	12.2
Visc @ 100°C	cSt	ASTM D445	15.5	14.36	13.55	13.16



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR03885235 **Received** : 17 Dec 2015
Lab Number : 03885235 **Tested** : 18 Dec 2015
Unique Number : 7240525 **Diagnosed** : 18 Dec 2015 - Wes Davis
Test Package : MOB 2

SPEAR H TRUCKING
 CANYON, TX
 US 79015
 Contact: MIKE LEWIS

To discuss this sample report, contact Customer Service at 1-800-827-0711.
 * - 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)

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