



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HYUNDA 365KXB
 Component
Gasoline Engine
 Fluid
TRC PRO-SPEC MULTI-VIS SB 5W20 (5 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02631584	TR02519377	TR02492004
Sample Date		Client Info		02 Apr 2024	20 Oct 2022	13 May 2022
Machine Age	kms	Client Info		172423	160890	154000
Oil Age	kms	Client Info		2803	20000	12732
Filter Age	kms	Client Info		2803	20000	12732
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Not Changed	Not Changed	Not Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>150	7	26	18
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	3	3
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>40	16	7	5
Lead	ppm	ASTM D5185(m)	>50	0	<1	<1
Copper	ppm	ASTM D5185(m)	>155	2	1	1
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	<1	<1

CONTAMINATION

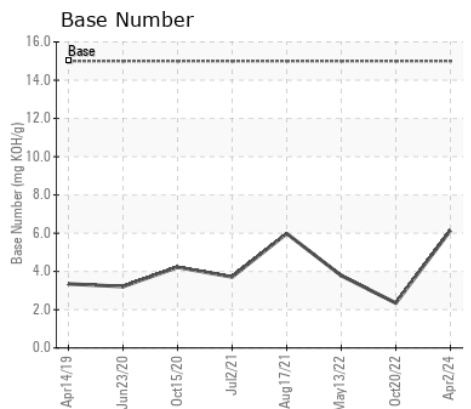
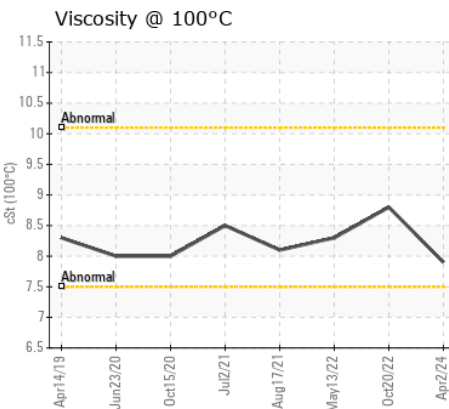
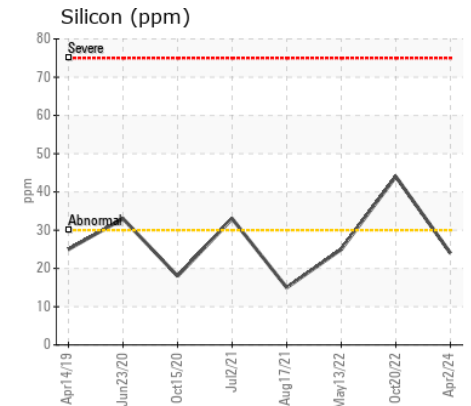
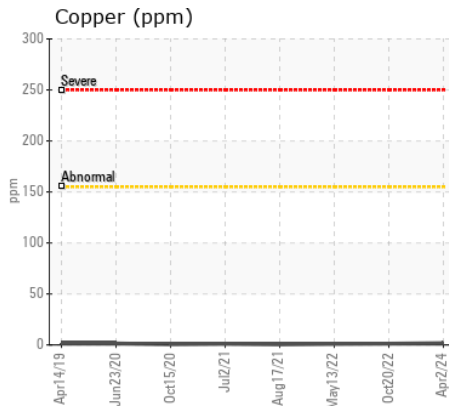
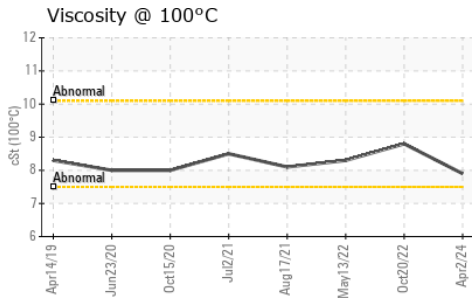
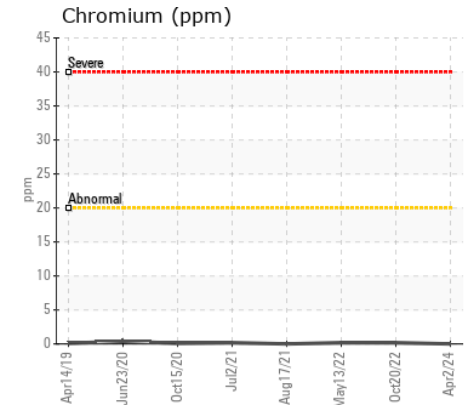
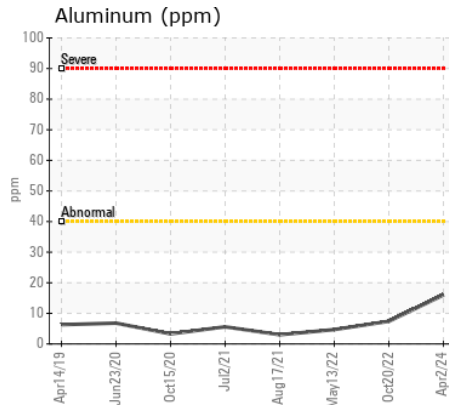
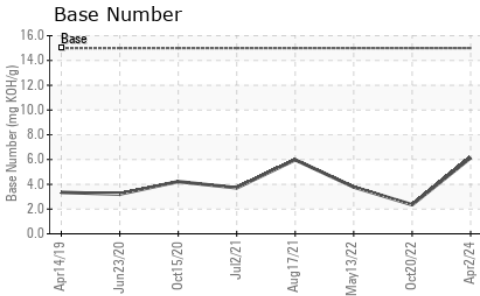
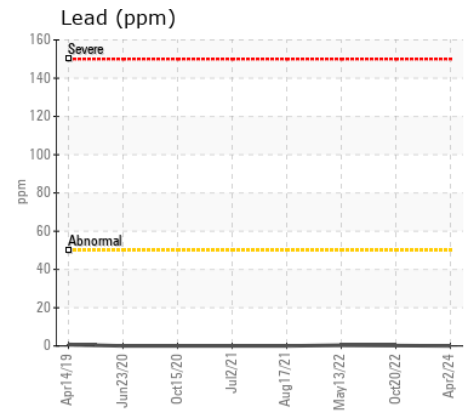
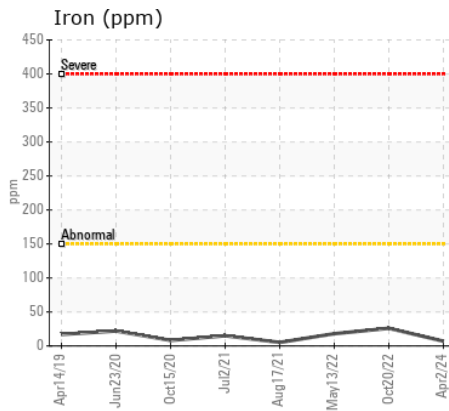
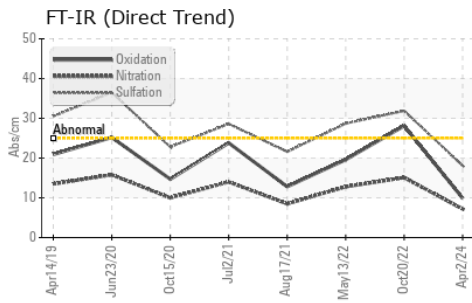
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>30	24	▲ 44	25
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	7.2	15.1	12.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.1	31.9	28.7
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 D5185(m)	>400	3	11	8
Boron	ppm	ASTM D5185(m)		51	13	18
Barium	ppm	ASTM D5185(m)		<1	0	0
Molybdenum	ppm	ASTM D5185(m)		279	131	135
Manganese	ppm	ASTM D5185(m)		<1	1	<1
Magnesium	ppm	ASTM D5185(m)		475	415	443
Calcium	ppm	ASTM D5185(m)	4200	1174	1263	1263
Phosphorus	ppm	ASTM D5185(m)	800	644	689	691
Zinc	ppm	ASTM D5185(m)	800	734	741	772
Sulfur	ppm	ASTM D5185(m)		2001	1666	1704
Oxidation	Abs/.1mm	ASTM D7414*	>25	9.9	28.1	19.6
Base Number (BN)	mg KOH/g	ASTM D2896*	15	6.14	2.35	3.78
Visc @ 100°C	cSt	ASTM D7279(m)		7.9	8.8	8.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02631584
Lab Number : **02631584**
Unique Number : 5772737
Test Package : MOB 2
Received : 26 Apr 2024
Tested : 26 Apr 2024
Diagnosed : 26 Apr 2024 - Wes Davis

WAYNE CONNOLLY
 34 MARRIOTT PLACE
 Saskatoon, SK
 CA S7L 4G1
 Contact: Wayne Connolly

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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F: