



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
DOOSAN D25S-7 5522 (S/N FDAOV-1930-01137)

Component
Hydraulic System

Fluid
TRC UNIVERSAL TORQUE FLUID (9 QTS)

RECOMMENDATION

Resample at the next service interval to monitor. (could be mixed).

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06103673	---	---
Sample Date		Client Info		27 Feb 2024	---	---
Machine Age	hrs	Client Info		1892	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	0	---	---
Chromium	ppm	ASTM D5185m	>10	<1	---	---
Nickel	ppm	ASTM D5185m	>10	6	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>10	0	---	---
Lead	ppm	ASTM D5185m	>10	2	---	---
Copper	ppm	ASTM D5185m	>75	4	---	---
Tin	ppm	ASTM D5185m	>10	1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

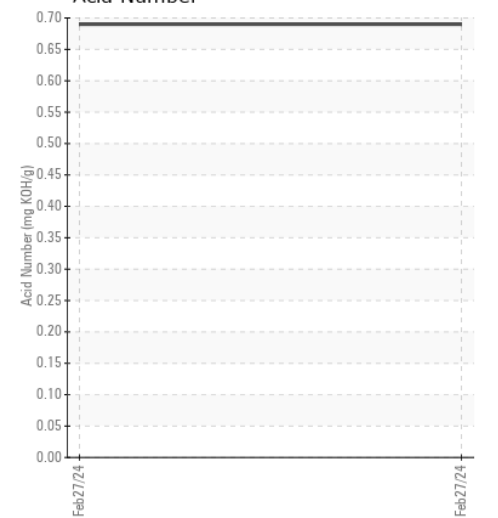
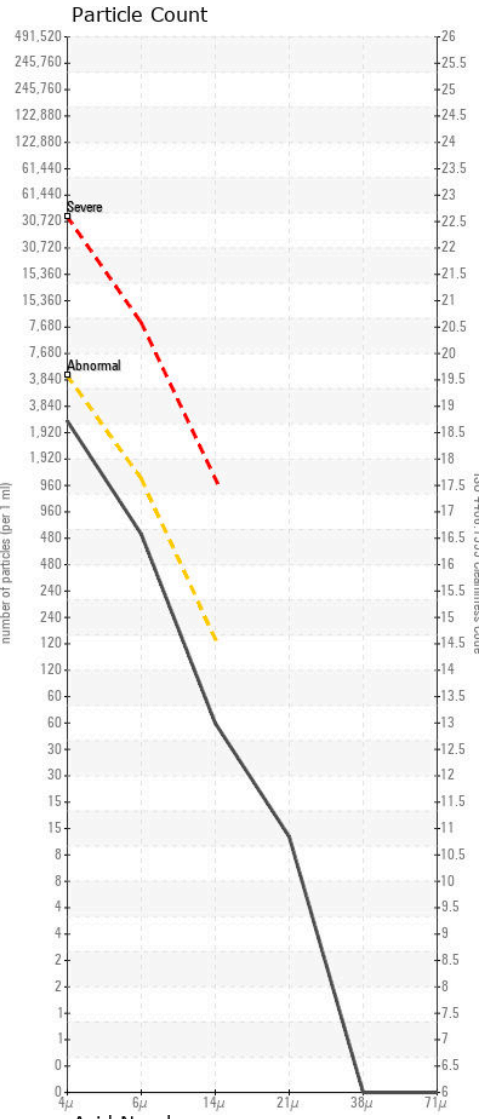
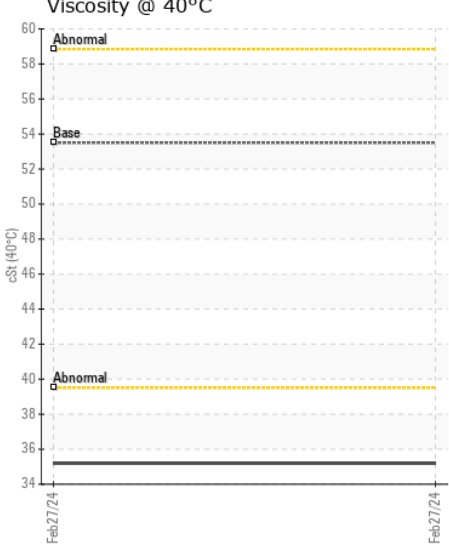
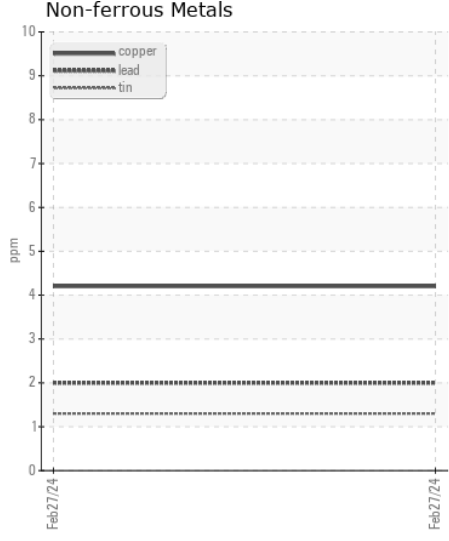
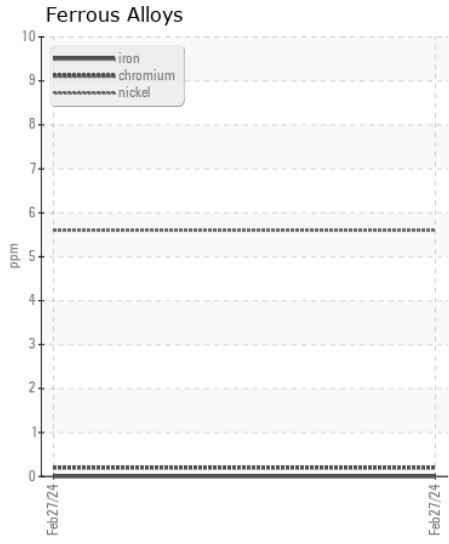
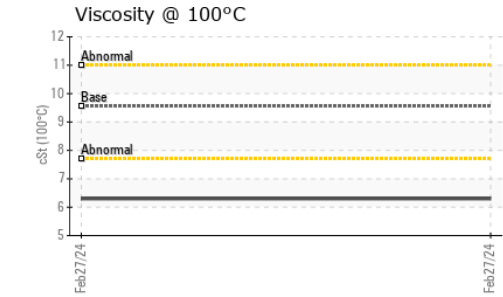
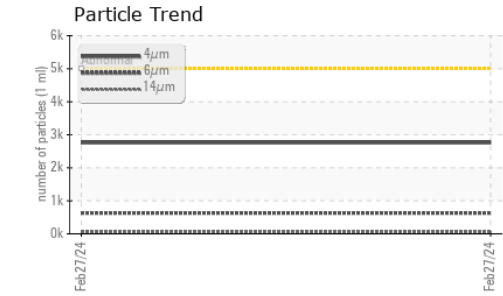
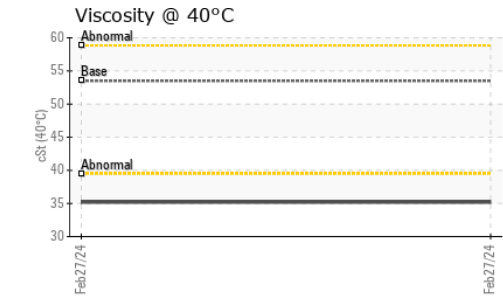
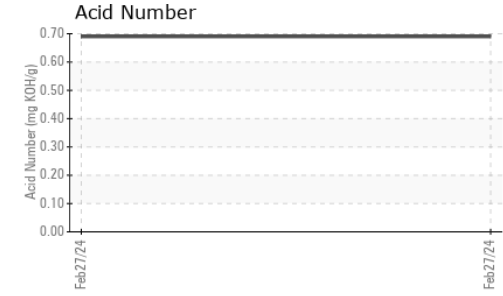
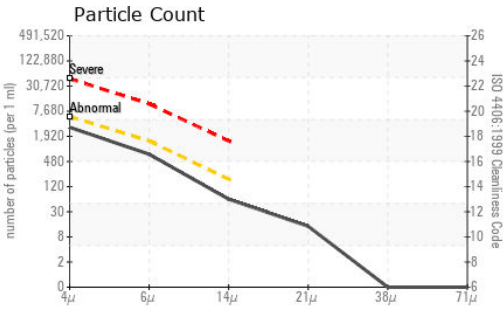
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	1	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---
Water		WC Method	>0.1	NEG	---	---
Particles >4µm		ASTM D7647	>5000	2760	---	---
Particles >6µm		ASTM D7647	>1300	629	---	---
Particles >14µm		ASTM D7647	>160	53	---	---
Particles >21µm		ASTM D7647	>40	12	---	---
Particles >38µm		ASTM D7647	>10	0	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	19/16/13	---	---
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	>0.1	NEG	---	---

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	---	---
Boron	ppm	ASTM D5185m		7	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		0	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		2	---	---
Calcium	ppm	ASTM D5185m	4200	409	---	---
Phosphorus	ppm	ASTM D5185m	1100	556	---	---
Zinc	ppm	ASTM D5185m	2000	826	---	---
Sulfur	ppm	ASTM D5185m		1509	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.69	---	---
Visc @ 40°C	cSt	ASTM D445	53.5	35.2	---	---
Visc @ 100°C	cSt	ASTM D445	9.55	6.3	---	---
Viscosity Index (VI)	Scale	ASTM D2270	164	130	---	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06103673
Lab Number : 06103673
Unique Number : 10901903
Test Package : MOB 2 (Additional Tests: KV100, VI)

TRECO
 10906 MONITOR MCKEE RD NE
 WOODBURN, OR
 US 97071
 Contact: JEFF WARREN

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: