

FLUID ANALYSIS

UIN 0BB4E84

Diesel Engine

Unit No. 1VRD37DCXF1000134

Unit:
Make Unidentified
Model Unidentified
Serial No. 1VRD37DCXF1000134

Site

Compartment:

Name Diesel Engine
Make
Model
Serial No.
Capacity: 0.0 Ltrs

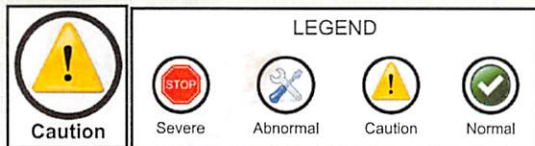
Customer:

BROTHERS HDD
2002 23Ave
Wainwright AB T9W0B8
Canada

DIAGNOSIS

Unit Make and/or Model not given. Viscosity low for specified oil grade. No abnormal wear detected. Please confirm grade of oil used in this component.

ANALYST: Pat.Libutti



DATE SAMPLED 03-Oct-25
DATE RECEIVED 08-Oct-25
DATE REPORTED 09-Oct-25

402-226
SEP

LAB NO. 40210736511
SIF NO. 706122606
TIME ON UNIT 7842
TIME ON OIL 401
OIL BRAND Unidentified
OIL TYPE Unidentified
OIL GRADE SAE 0W40
OIL ADDED
FILTER Not Applicable
OIL CHANGED Not Changed
WO NUMBER

Metals (ppm)

Iron (Fe) 78
Chromium (Cr) <1
Lead (Pb) <1
Copper (Cu) 5
Tin (Sn) <1
Aluminium (Al) <1
Nickel (Ni) <1
Silver (Ag) <1
Titanium (Ti) <1
Vanadium (V) <1

Contaminants (ppm)

Silicon (Si) 3
Sodium (Na) <1
Potassium (K) <1
Water (%) <0.05
Coolant No
Fuel (%) 2.00
Soot (%) Infrared D7844 0.4

Additives (ppm)

Magnesium (Mg) 1040
Calcium (Ca) 1372
Barium (Ba) <1
Phosphorus (P) 1077
Zinc (Zn) 1274
Molybdenum (Mo) 53
Boron (B) 14

Physical Tests

Viscosity (cSt 100C) 11.6

Physical / Chemical

Base number (mgKOH/g) 4.1
Oxidation (Abs/0.1mm) 23
E2412/D7414
Nitration (Abs/0.1mm) E2412 12
Sulphation (Abs/0.1mm) 23
E2412/D7415





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U.S. Laboratories

Atlanta, Georgia - 420

5300 Oakbrook Parkway
Building 200 Suite 245
Norcross, GA 30093
800.394.3669

Valley View, Ohio - 410

6180 Halle Dr. Suite D
Valley View, OH 44125
800.726.5400

Kansas City, Kansas - 430

935 Sunshine Road
Kansas City, KS 66115
800.332.8055

Phoenix, Arizona - 440

3319 West Earl Drive
Phoenix, AZ 85017
800.445.7930

Portland, Oregon - 401

4943 NW Front Avenue
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Burlington, ON L7L5Y7
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Edmonton, Alberta - 402

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Sales & Marketing

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10450 Stancliff Road, Suite 210
Houston, TX 77099
877.835.8437

International Locations

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Brisbane, Perth, Sydney, Muswellbrook

South America

Santiago de Chile, Belo Horizonte, Brazil

New Zealand

Wellington

Southeast Asia

Kuala Lumpur, Singapore

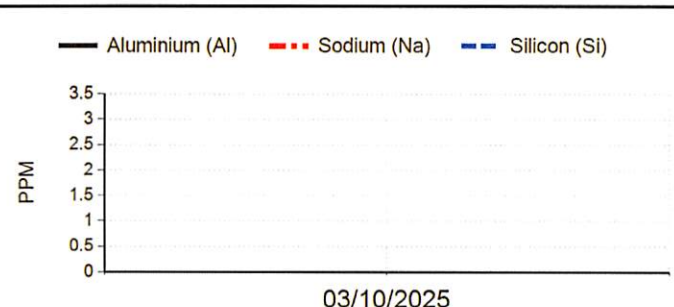
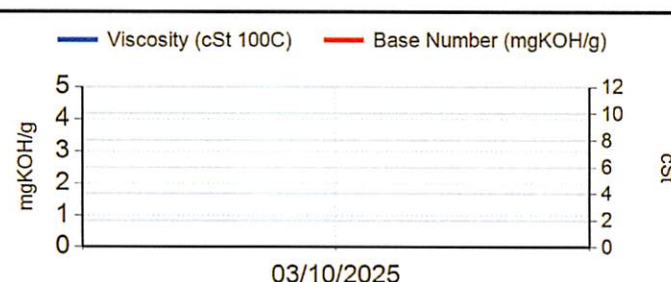
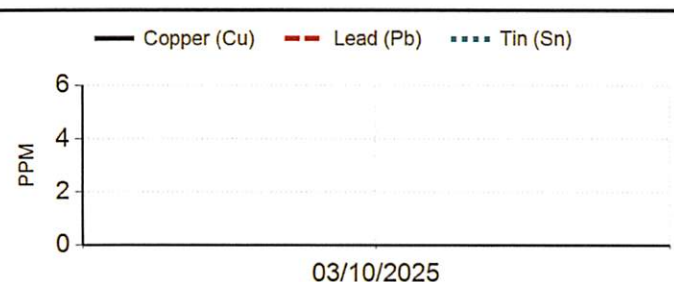
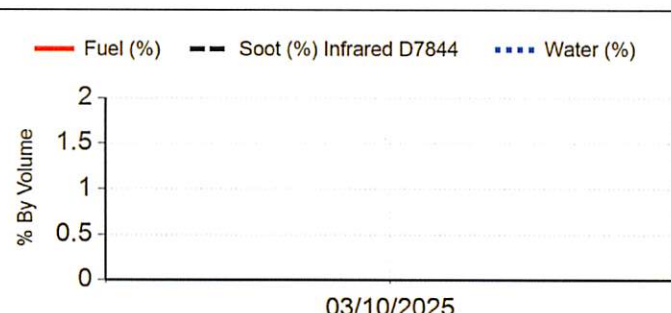
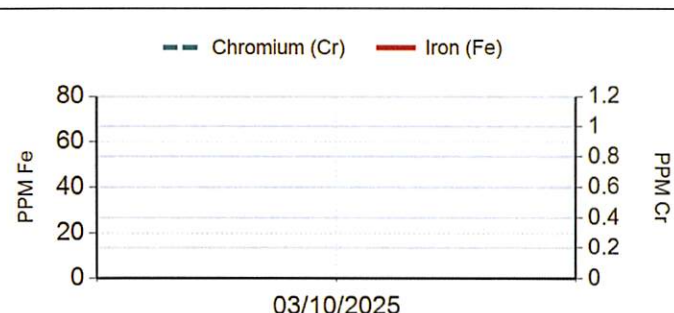
Europe

Prague

TEST METHODS:

Acid Number:	ASTM D974/D664 (*M)
Base Number:	ASTM D4739 (*M)
Base Number (Perchloric):	ASTM D2896B, back (*M)
Fuel Dilution by GC:	ASTM D7593
Fuel Dilution Visc/Setaflash	In House
Fuel Soot ATR/IR:	ASTM D7686 (*M)
Soot by FTIR:	ASTM D7844
Glycol:	In House
Metals by ICP AES:	ASTM D5185 (*M)
Ox, NOx, SOx, FTIR:	ASTM E2412/D7418/D7414 D7415
PQ Index:	ASTM D8120 (*M)
Particle Count:	ASTM D7647 (*M) / ISO 4406
Kinematic Viscosity:	ASTM D445 (*M) / D7279 (*M)
Water KF:	D6304 / E203 (*M)
Water Crackle:	In House

*M - Modified Method



Filter Image

Filter patch test is not performed Contact laboratory for more information

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Brandt Tractor Ltd. (West) - TM
Attn: Matt Mukli

0003 v1.5

FLUID ANALYSIS

UIN 0BB4E78

Hydraulic System

Unit No. 1VRD37DCXF1000134

Unit:
Make Unidentified
Model Unidentified
Serial No. 1VRD37DCXF1000134

Site

Compartment:

Name Hydraulic System
Make
Model
Serial No.
Capacity: Ltrs

Customer:

BROTHERS HDD
2002 23Ave
Wainwright AB T9W0B8
Canada

DIAGNOSIS

Note: Particle count levels appear to be high. Advise change filters if not already done. Oil type and/or fluid grade not given.

ANALYST: LeDonna.Neu

LEGEND



Caution



Severe



Abnormal



Caution



Normal

UNIT # 106 HND
DATE SAMPLED 03-Oct-25
DATE RECEIVED 08-Oct-25
DATE REPORTED 10-Oct-25
LAB NO. 40210736540
SIF NO. 706122607
TIME ON UNIT 7942
TIME ON OIL 1308
OIL BRAND Unidentified
OIL TYPE Unidentified
OIL GRADE ISO 32
OIL ADDED
FILTER Not Applicable
OIL CHANGED Not Changed
WO NUMBER

Physical / Chemical

Acid Number (mgKOH/g) 0.56

Metals (ppm)

Iron (Fe) 12
Chromium (Cr) <1
Lead (Pb) <1
Copper (Cu) 2
Tin (Sn) <1
Aluminium (Al) <1
Nickel (Ni) <1
Silver (Ag) <1
Titanium (Ti) <1
Vanadium (V) <1

Contaminants (ppm)

Silicon (Si) <1
Sodium (Na) <1
Potassium (K) <1
Water by Karl Fischer % 0.005
Solids (%) 0.1

Additives (ppm)

Magnesium (Mg) 10
Calcium (Ca) 64
Barium (Ba) <1
Phosphorus (P) 382
Zinc (Zn) 496
Molybdenum (Mo) <1
Boron (B) <5

Physical Tests

Viscosity (cSt 40C) 33.3

Particle Count

ISO 4406 Rating 22/21/16
> 4 Micron (particles/ml) 26130
> 6 Micron (particles/ml) 13331
> 14 Micron (particles/ml) 537
> 21 Micron (particles/ml) 145
> 38 Micron (particles/ml) 4



18/16/13

FLOW METERS on THRUST MOTOR
MOBILE EXTRA

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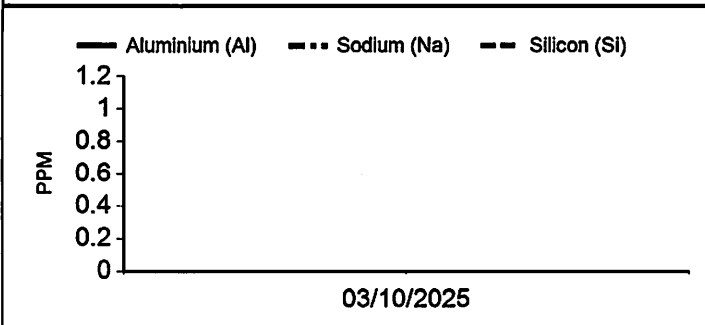
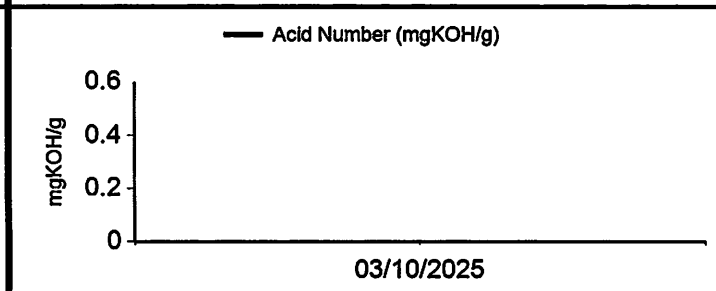
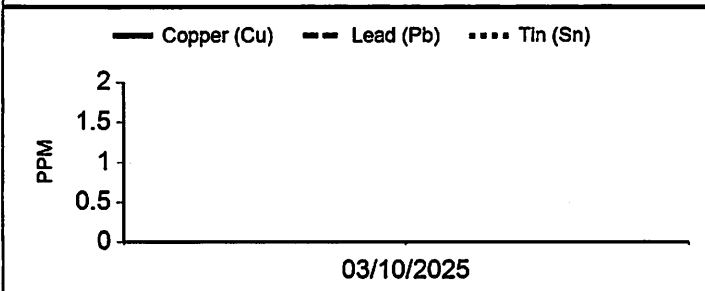
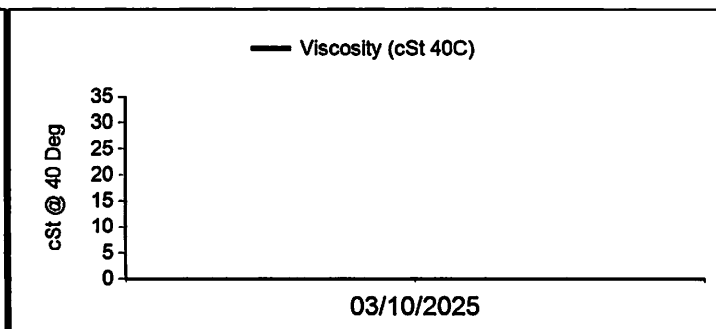
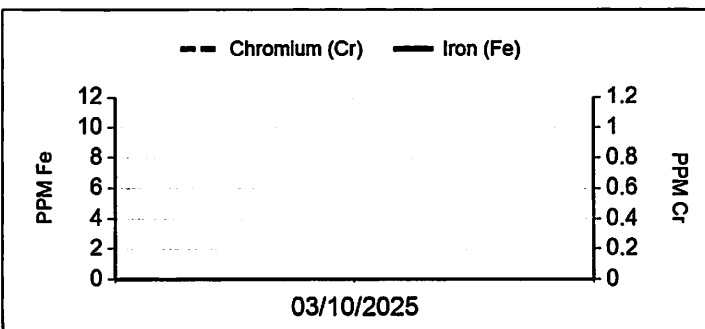
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