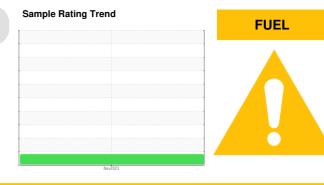
PROBLEM SUMMARY



Machine Id **7016M** Component **Diesel Engine** Fluid **NOT GIVEN (--- GAL)**

COMPONENT CONDITION SUMMARY

| ≜ 9.0 - | Fuel Dilution |
|-----------------------|----------------------|
| 8.0 | Severe |
| 7.0 | |
| 6.0 | Abnormai |
| _⊒5.0• ,⊒ ≈4.0• | - |
| °~4.0• 3.0- | |
| 2.0 | |
| 1.0 | |
| 0.0 | 23 + - 23 |
| | Nov17/23 Nov17/23 |
| | |

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

| PROBLEMATIC T | EST RE | SULTS | | | |
|---------------|--------|------------|----|--------------|------|
| Sample Status | | | | MARGINAL | |
| Fuel | % | ASTM D3524 | >5 | A 3.1 | |

Customer Id: IDECHIIL Sample No.: IL0034374 Lab Number: 06026031 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

| RECOMMENDED A | IENDED ACTIONS | | | | | |
|----------------------|----------------|------|---------|---|--|--|
| Action | Status | Date | Done By | Description | | |
| Information Required | | | ? | Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the component make and model with your next sample. | | |

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **7016M** Component **Diesel Engine** Fluid **NOT GIVEN (--- GAL)**

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

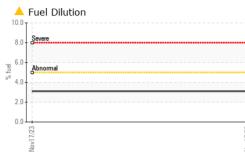
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

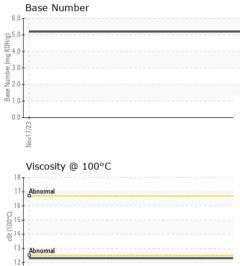
| SAMPLE INFORM | ATION | method | limit/base | current | history1 | history2 |
|------------------|----------|-------------|------------|--------------------|----------|----------|
| Sample Number | | Client Info | | IL0034374 | | |
| Sample Date | | Client Info | | 17 Nov 2023 | | |
| Machine Age | mls | Client Info | | 37832 | | |
| Oil Age | mls | Client Info | | 0 | | |
| Oil Changed | | Client Info | | Changed | | |
| Sample Status | | | | MARGINAL | | |
| CONTAMINATION | I | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.2 | NEG | | |
| Glycol | | WC Method | | NEG | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 75 | | |
| Chromium | ppm | ASTM D5185m | >20 | 2 | | |
| Nickel | ppm | ASTM D5185m | >4 | 1 | | |
| Titanium | ppm | ASTM D5185m | | <1 | | |
| Silver | ppm | ASTM D5185m | >3 | 0 | | |
| Aluminum | ppm | ASTM D5185m | >20 | 19 | | |
| Lead | ppm | ASTM D5185m | >40 | 6 | | |
| Copper | ppm | ASTM D5185m | >330 | 152 | | |
| Tin | ppm | ASTM D5185m | >15 | 2 | | |
| Vanadium | ppm | ASTM D5185m | | <1 | | |
| Cadmium | ppm | ASTM D5185m | | 0 | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 30 | | |
| Barium | ppm | ASTM D5185m | | 0 | | |
| Molybdenum | ppm | ASTM D5185m | | 62 | | |
| Manganese | ppm | ASTM D5185m | | 5 | | |
| Magnesium | ppm | ASTM D5185m | | 376 | | |
| Calcium | ppm | ASTM D5185m | | 1817 | | |
| Phosphorus | ppm | ASTM D5185m | | 957 | | |
| Zinc | ppm | ASTM D5185m | | 1231 | | |
| Sulfur | ppm | ASTM D5185m | | 2416 | | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >25 | 13 | | |
| Sodium | ppm | ASTM D5185m | | 4 | | |
| Potassium | ppm | ASTM D5185m | >20 | 62 | | |
| Fuel | % | ASTM D3524 | >5 | <mark>▲</mark> 3.1 | | |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | *ASTM D7844 | >3 | 2.4 | | |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 11.6 | | |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 27.1 | | |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 23.8 | | |
| | | | | | | |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 5.2 | | |



11 Nov17/23

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 | | |
| Mov17/23 | Appearance | scalar | *Visual | NORML | NORML | | |
| Nav | Odor | scalar | *Visual | NORML | NORML | | |
| | Emulsified Water | scalar | *Visual | >0.2 | NEG | | |
| | Free Water | scalar | *Visual | | NEG | | |
| | FLUID PROPERT | FIES | method | limit/base | current | history1 | history2 |
| | Visc @ 100°C | cSt | ASTM D445 | | 12.3 | | |
| | GRAPHS | | | | | | |
| | Ferrous Alloys | | | | | | |
| | 80 | | | | | | |
| | 60 + nickel | | | | | | |
| | 50 | | | | | | |
| | Ē 40 - | | | | | | |
| | 30- | | | | | | |
| | 20 | | | | | | |
| | 10- | | | | | | |
| | | | | | | | |
| | Nov17/23 | | | Nov17/23 | | | |
| | Nov | | | Nov | | | |
| | Non-ferrous Meta | s | | | | | |
| | 160 140 copper | | | | | | |
| | 140 - 120 - 120 - 100 - | | | | | | |
| | 100 | | | | | | |
| | <u>ال</u> 80 | | | | | | |
| | 60 | | | | | | |
| | 40 - | | | | | | |
| | 20- | | | | | | |
| | | | | | | | |
| | Nov17/23 | | | Nov17/23 | | | |
| | | | | | | | |
| | | | | Nov | | | |
| | Viscosity @ 100°C | 2 | | Nov | Base Number | | |
| | Viscosity @ 100°C | 2 | | 6.0- | Base Number | | |
| | Viscosity @ 100°C | 2 | | 6.0- | Base Number | | |
| | Viscosity @ 100°C | 2 | | 6.0- | Base Number | | |
| | Viscosity @ 100°C | 2 | | 6.0- | Base Number | | |
| | Viscosity @ 100°C | 2 | | 6.0- | Base Number | | |
| | Viscosity @ 100°C | | | 6.0- | Base Number | | |
| | Viscosity @ 100°C | | | 6.0- | Base Number | | |
| | Viscosity @ 100°C | | | 6.0 5.0 (0) (0) (0) (0) (0) (0) (0) (0) (0) (0 | Base Number | | |
| | Viscosity @ 100°C | | | 6.0- 5.0- 90 4.0- 90 4 | | | |
| | Viscosity @ 100°C | | | 6.0 5.0 (0) (0) (0) (0) (0) (0) (0) (0) (0) (0 | Base Number | | |
| Laboratory Sample No. Lab Number Unique Number | Viscosity @ 100°C | 501 Madis Received Diagnose Diagnost | t : 06 [ed : 12 [ician : Wes | 6.0- 5.0- 900 4.0- 900 2.0- 900 2.0- 90 | EZILINAN RUSH TR | UCK CENTER - CHI 5 SOUTH CENT | CAGO IDEALEAS TRAL AVENU CHICAGO, US 6063 |
| Laboratory Sample No. Lab Number | Viscosity @ 100°C | 501 Madis Received Diagnose Diagnost Tests: Fu | l : 06 E ed : 12 E ician : Wes elDilution, Pe | 6.0- 5.0- 9,04.0- 1,0- 1,0- 1,0- 1,0- 1,0- 1,0- 1,0- 1, | EZZLIMAN RUSH TR 465 | 5 SOUTH CEN | CAGO IDEALEAS TRAL AVENU CHICAGO, US 6063 :: MIKE LINLE |

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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