WEAR CONTAMINATION FLUID CONDITION

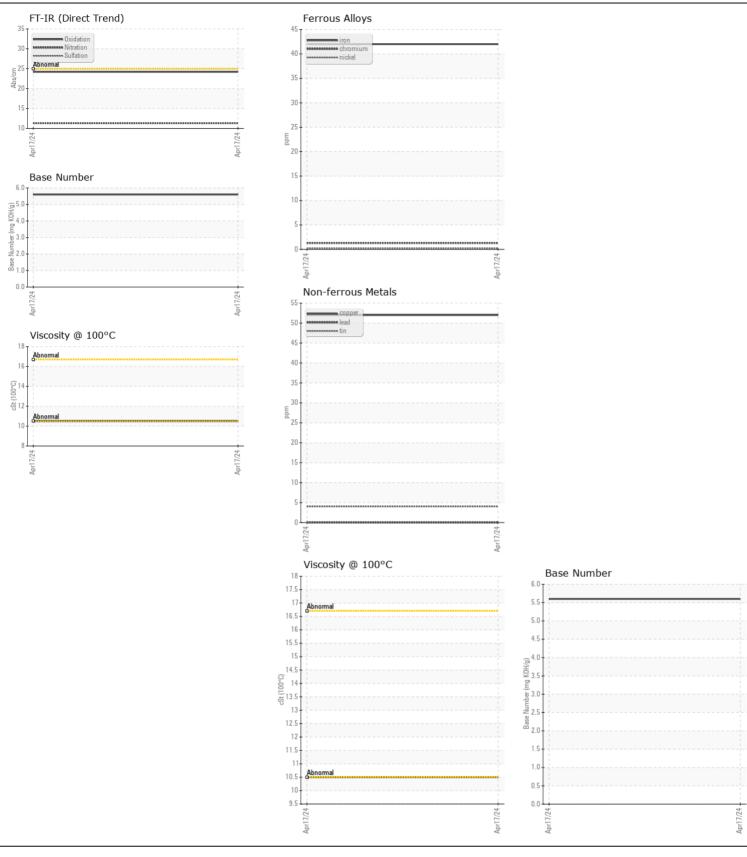
NORMAL NORMAL



MACK 2416
Component
Diesel Engine

CERTIFIED SPECTRA XTREME 15W40 (--- GAL)

| Rosample at the next service interval to monitor. Sample Date Client Info PAG107878 | RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|--|--|------------------|------|------------------|-----------|-------------|----------|----------|
| Machine Age mis | Decemble at the payt consists interval to manifer | Sample Number | | Client Info | | PCA0107631 | | |
| Oil Age | Resample at the next service interval to monitor. | Sample Date | | Client Info | | 17 Apr 2024 | | |
| Filter Age | | Machine Age | mls | Client Info | | 28264 | | |
| Oil Changed Cilent Info Changed Cilent Info Changed Ch | | Oil Age | mls | Client Info | | 28264 | | |
| OII Changed Client Info Client Info Changed | | Filter Age | mls | Client Info | | 28264 | | |
| Filter Changed Sample Status | | - | | Client Info | | Changed | | |
| Metal levels are typical for a components first oil change. Iron | | Filter Changed | | Client Info | | Changed | | |
| VEAR | | | | | | | | |
| Metal levels are typical for a components first oil change. Chromium ppm ASTM D8168m >20 1 Titanium ppm ASTM D8168m >2 <1 Titanium ppm ASTM D8168m >20 21 Titanium ppm ASTM D8168m >30 0 0 Titanium ppm ASTM D8168m >40 0 0 Titanium ppm ASTM D8168m >20 49 Titanium ppm ASTM D8168m >25 65 Titanium ppm ASTM D8168m >25 45 Titanium ppm ASTM D8168m > | | | | | | | | |
| Metal levels are typical for a components first oil change. Nickel ppm ASTM D5185n 52 <1 Titanium ppm ASTM D5185n 52 <1 ASTM D5185n 52 ASTM D5185n 53 52 ASTM D5185n 53 53 53 ASTM D5185n 53 54 AstM D5185n 53 54 AstM D5185n 50 0 | WEAR | Iron | ppm | ASTM D5185m | >120 | 42 | | |
| Nicker Distribution Property ASTM 05185m 2-2 <1 | | Chromium | ppm | ASTM D5185m | >20 | 1 | | |
| Silver ppm ASTM DS185m >2 | Metal levels are typical for a components first oil change. | Nickel | ppm | ASTM D5185m | >5 | <1 | | |
| Aluminum ppm ASTM D5185m >20 21 | | Titanium | ppm | ASTM D5185m | >2 | <1 | | |
| Aluminum ppm ASTM D6185m >20 21 | | Silver | ppm | ASTM D5185m | >2 | <1 | | |
| Lead | | Aluminum | | ASTM D5185m | >20 | 21 | | |
| Copper | | | | | | | | |
| Tin | | | | | | | | |
| Vanadium | | | | | | | | |
| White Metal Scalar Visual NONE NON | | | | | 7.0 | | | |
| Vellow Metal Scalar Visual NONE NONE CONTAMINATION | | | | | NONE | _ | | |
| Silicon Depth ASTM D5185m 2-20 49 | | | | | | | | |
| Potassium ppm ASTM D5185m >20 49 | | | | Vioual | | | | |
| Potassium ppm ASTM D5185m >20 49 | CONTAMINATION | Silicon | ppm | ASTM D5185m | >25 | 65 | | |
| Elevated aluminum (Al) 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. There is no indication of any contamination in the oil. Fuel WC Method WC Method WEG WEG WC Method WEG WC Method WEG WEG WEG WC Method WEG WEG WEG WC MEthod WEG WE | | Potassium | | ASTM D5185m | >20 | | | |
| Water WC Method Sol NEG Sol NEG Sol WC Method Sol NEG Sol Sol NEG Sol NEG Sol NEG Sol Sol NEG Sol Sol Sol NEG Sol So | | | 1-1- | | | | | |
| Solid | | | | WC Method | >0.2 | | | |
| Soot % | ··· | | | | 7 0.2 | | | |
| Nitration Abs/cm *ASTM D7624 >20 11.3 Sulfation Abs/tmm *ASTM D7415 >30 25.0 Silt scalar *Visual NONE NON | indication of any contamination in the oil. | - | % | | \4 | | | |
| Sulfation Abs/imm *ASTM D7415 >30 25.0 Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML | | | | | | | | |
| Silt Scalar *Visual NONE NORML NORM | | | | | | | | |
| Debris Scalar *Visual NONE NONE NONE Sand/Dirt Scalar *Visual NONE NORML NO | | | | | | | | |
| Sand/Dirt Scalar *Visual NONE NORML NORML | | | | | | | | |
| Appearance | | | | | | | | |
| Codor Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual NORML NOR | | | | | | | | |
| Emulsified Water scalar *Visual >0.2 NEG | | | | | | | | |
| Sodium ppm ASTM D5185m 3 | | | | | | | | |
| Boron ppm ASTM D5185m 34 Magnesium ppm ASTM D5185m 5 Magnesium ppm ASTM D5185m 5 Calcium ppm ASTM D5185m 1478 Zinc ppm ASTM D5185m 928 Sulfur ppm ASTM D5185m 92610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | | Linuisincu Water | | Vioual | | | | |
| Boron ppm ASTM D5185m 34 Magnesium ppm ASTM D5185m 5 Magnesium ppm ASTM D5185m 5 Calcium ppm ASTM D5185m 1478 Zinc ppm ASTM D5185m 928 Sulfur ppm ASTM D5185m 92610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | FLUID CONDITION | Sodium | ppm | ASTM D5185m | | 3 | | |
| oil. The condition of the oil is suitable for further service. Molybdenum ppm ASTM D5185m 125 Manganese ppm ASTM D5185m 5 Magnesium ppm ASTM D5185m 813 Calcium ppm ASTM D5185m 1478 Phosphorus ppm ASTM D5185m 797 Zinc ppm ASTM D5185m 928 Sulfur ppm ASTM D5185m 2610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | The BN result indicates that there is suitable alkalinity remaining in the | Boron | | ASTM D5185m | | 34 | | |
| Molybdenum ppm ASTM D5185m 125 Manganese ppm ASTM D5185m 5 Magnesium ppm ASTM D5185m 5 Magnesium ppm ASTM D5185m 813 Calcium ppm ASTM D5185m 1478 Phosphorus ppm ASTM D5185m 797 Zinc ppm ASTM D5185m 928 Sulfur ppm ASTM D5185m 2610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | | Barium | | ASTM D5185m | | <1 | | |
| Manganese ppm ASTM D5185m 5 Magnesium ppm ASTM D5185m 813 Calcium ppm ASTM D5185m 1478 Phosphorus ppm ASTM D5185m 797 Zinc ppm ASTM D5185m 928 Sulfur ppm ASTM D5185m 2610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | | Molybdenum | | | | | | |
| Magnesium ppm ASTM D5185m 813 Calcium ppm ASTM D5185m 1478 Phosphorus ppm ASTM D5185m 797 Zinc ppm ASTM D5185m 928 Sulfur ppm ASTM D5185m 2610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | | , | | | | | | |
| Calcium ppm ASTM D5185m 1478 Phosphorus ppm ASTM D5185m 797 Zinc ppm ASTM D5185m 928 Sulfur ppm ASTM D5185m 2610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | | | | | | | | |
| Phosphorus ppm ASTM D5185m 797 Zinc ppm ASTM D5185m 928 Sulfur ppm ASTM D5185m 2610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | | 0 | | | | | | |
| Zinc ppm ASTM D5185m 928 Sulfur ppm ASTM D5185m 2610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | | | | | | | | |
| Sulfur ppm ASTM D5185m 2610 Oxidation Abs/.1mm *ASTM D7414 >25 24.2 | | • | | | | | | |
| Oxidation | | | | | | | | |
| | | | | | >25 | | | |
| Date Humber (Drt) Ingitioning Motivi Decode | | | | | 7 20 | | | |
| Visc @ 100°C cSt ASTM D445 (10.5) | | , , | | | | | | |
| 1.50 @ 100 O OOL /101W B410 | | 7.00 @ 700 0 | 001 | . 10 1111 D 1 10 | | | | |







Certificate L2367

Laboratory Sample No.

: PCA0107631 Lab Number : 06160173 Unique Number: 10995596 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 25 Apr 2024 **Tested** : 26 Apr 2024

Diagnosed : 26 Apr 2024 - Wes Davis

Z FORCE TRANSPORTATION INC

700 E JOE ORR RD CHICAGO HEIGHTS, IL US 60411

Contact: MIKE PROCANIN

To discuss this sample report, contact Customer Service at 1-800-237-1369. mprocanin@zforcetransportation.com T:

* - 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)

F: