

# **OIL ANALYSIS REPORT**

## Area ANDEROL 46 [5915] KAESER 8041416 - NORFOLK SOUTHERN (S/N 1251) Component

Compressor

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

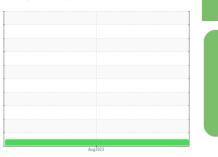
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



Sample Rating Trend



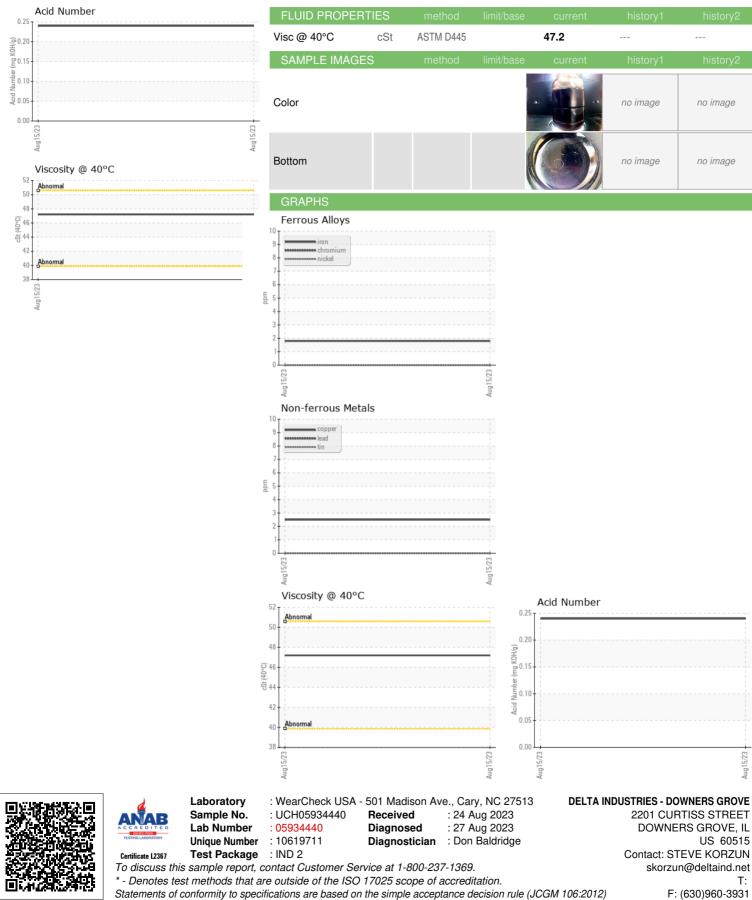
NORMAL

Sample Number         Client Info         UCH05934440             Machine Age         hrs         Client Info         13 Aug 2023             Machine Age         hrs         Client Info         13483             Oil Age         hrs         Client Info         4010             Sample Status         Client Info         Changed              Sample Status         nethod         Imit/base         current         history1            VEAR METALS         method         Imit/base         current             Nickel         ppm         ASTM D5185m         >30              Nickel         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >3         0             Lead         ppm         ASTM D5185m         >10         0             Cadmium         ppm         ASTM D5185m         0             Gadmium
Machine Age         hrs         Client Info         13483             Oil Age         hrs         Client Info         4010             Oil Changed         Client Info         Changed             Sample Status         Image         Image             WEAR METALS         method         Imit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         2             Nickel         ppm         ASTM D5185m         >10         0             Silver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >10         2             Lead         ppm         ASTM D5185m         >10         0             Cadmium         ppm         ASTM D5185m         10         0             Vanadium         ppm         ASTM D5185m         0              Malpdeenum
Oil Age         hrs         Client Info         4010             Sample Status         Client Info         Changed             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         2             Nickel         ppm         ASTM D5185m         >3         0             Nickel         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >10         2             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Cadmium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Mol
Oil Changed Sample Status         Client Info         Changed NORMAL             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         2             Ohromium         ppm         ASTM D5185m         >50         2             Nickel         ppm         ASTM D5185m         >3         0             Nickel         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >2         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Yanadium         ppm         ASTM D5185m         >10         0             Cadmium         ppm         ASTM D5185m         0              Molybdenum         ppm         ASTM D5185m         0
Sample Status         Image: Status         Normat.         Image: Status         Image: Status<
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         2             Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >3         0             Silver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >10         2             Lead         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         0              Vanadium         ppm         ASTM D5185m         0              ADDTIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0 </th
Iron         ppm         ASTM D5185m         >50         2             Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >3         0             Titanium         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >10         2             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0 <t< th=""></t<>
Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >3         0             Titanium         ppm         ASTM D5185m         >3         0             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >10         2             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         2             Vanadium         ppm         ASTM D5185m         >10         0             Cadmium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0
Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >3         0             Titanium         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >10         2             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         2             Vanadium         ppm         ASTM D5185m         >50         2             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0
Nickel         ppm         ASTM D5185m         >3         0             Titanium         ppm         ASTM D5185m         >3         0             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >10         2             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Yanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         0              Molybdenum         ppm         ASTM D5185m         0              Magnesium         ppm         ASTM D5185m         <1              Magnesium         ppm         ASTM D
Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >10         2             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         2             Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         <0
Aluminum         ppm         ASTM D5185m         >10         2             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         2             Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Cadmium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         <0             Calcium         ppm         ASTM D5185m         20
Aluminum         ppm         ASTM D5185m         >10         2             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         2             Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Cadmium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         561             Calcium         ppm         ASTM D5185m         200
Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         2             Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         >10         0             Cadmium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Malybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         0            Magnesium         ppm         ASTM D5185m         <61             Magnesium         ppm         ASTM D5185m         561              Sulfur         ppm         ASTM D5185m         >20 </th
Copper         ppm         ASTM D5185m         >50         2             Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         <1             Calcium         ppm         ASTM D5185m         <0             Sulfur         ppm         ASTM D5185m         <20             Sulfur         ppm         ASTM D5185m         <20             Sulfur         ppm
Tin         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         <11             Yangnesium         ppm         ASTM D5185m         <0             Calcium         ppm         ASTM D5185m         20             Sulfur         ppm         ASTM D5185m         2206             Sulfur         ppm         ASTM D5185m         >25         <
VanadiumppmASTM D5185m0CadmiumppmASTM D5185m0ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m0BariumppmASTM D5185m0MolybdenumppmASTM D5185m0ManganeseppmASTM D5185m0MagnesiumppmASTM D5185m0CalciumppmASTM D5185m0PhosphorusppmASTM D5185m0ZincppmASTM D5185m20SulfurppmASTM D5185m2206SulfurppmASTM D5185m>25<1SodiumppmASTM D5185m>201FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2
CadmiumppmASTM D5185m0ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m0BariumppmASTM D5185m0MolybdenumppmASTM D5185m0ManganeseppmASTM D5185m0MagnesiumppmASTM D5185m<1CalciumppmASTM D5185m0PhosphorusppmASTM D5185m0ZincppmASTM D5185m561SulfurppmASTM D5185m2206SulfurppmASTM D5185m2206SodiumppmASTM D5185m>25<1SodiumppmASTM D5185m>201FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2
Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         <1             Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         <1             Calcium         ppm         ASTM D5185m         <1             Calcium         ppm         ASTM D5185m         <1             Phosphorus         ppm         ASTM D5185m         <561             Zinc         ppm         ASTM D5185m         200             Sulfur         ppm         ASTM D5185m         2206             Sulfur         ppm         ASTM D5185m         >25         <1             Sodium         ppm         ASTM D5185m         >25         <1             Potassium         ppm         ASTM D5185m         >20         1
Barium         ppm         ASTM D5185m         <1
Molybdenum         ppm         ASTM D5185m         O            Manganese         ppm         ASTM D5185m         O             Magnesium         ppm         ASTM D5185m         O             Magnesium         ppm         ASTM D5185m         <1
Manganese         ppm         ASTM D5185m         0            Magnesium         ppm         ASTM D5185m         <1             Calcium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         561             Zinc         ppm         ASTM D5185m         20             Sulfur         ppm         ASTM D5185m         2206             Sulfur         ppm         ASTM D5185m         2206             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m<>25         <1             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base
Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         <1             Calcium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         561             Zinc         ppm         ASTM D5185m         20             Sulfur         ppm         ASTM D5185m         2206             Sulfur         ppm         ASTM D5185m         2206             Solicon         ppm         ASTM D5185m         >25         <1             Sodium         ppm         ASTM D5185m         >25         <1             Potassium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base         current         history1         history2
Calcium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         561             Zinc         ppm         ASTM D5185m         20             Sulfur         ppm         ASTM D5185m         2206             Sulfur         ppm         ASTM D5185m         2206             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1             Sodium         ppm         ASTM D5185m         >25         <1             Potassium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base         current         history1         history2
Phosphorus         ppm         ASTM D5185m         561             Zinc         ppm         ASTM D5185m         20             Sulfur         ppm         ASTM D5185m         2206             Sulfur         ppm         ASTM D5185m         2206             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base         current         history1         history2
ZincppmASTM D5185m20SulfurppmASTM D5185m2206CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m<>25<1SodiumppmASTM D5185m<>201PotassiumppmASTM D5185m<>201FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2
SulfurppmASTM D5185m2206CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25<1SodiumppmASTM D5185m>200PotassiumppmASTM D5185m>201FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m<>25<1SodiumppmASTM D5185m0PotassiumppmASTM D5185m>201FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2
Silicon         ppm         ASTM D5185m         >25         <1
SodiumppmASTM D5185m0PotassiumppmASTM D5185m>201FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2
Potassium     ppm     ASTM D5185m     >20     1         FLUID DEGRADATION     method     limit/base     current     history1     history2
FLUID DEGRADATION method limit/base current history1 history2
Acid Number (AN) ma KOH/a ASTM D8045 0.24
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
Appearance scalar *Visual NORML NORML
Odor scalar *Visual NORML NORML
Emulsified Water scalar *Visual >0.05 NEG

Contact/Location: STEVE KORZUN - UCDELDOW



# **OIL ANALYSIS REPORT**



Contact/Location: STEVE KORZUN - UCDELDOW

US 60515

T:

no image

no image