

## **OIL ANALYSIS REPORT**

Sample Rating Trend



## TOTE - P66 GUARDOL FLEET 15W40

Component New (Unused) Oil

Fluid {not provided} (--- QTS)

## DIAGNOSIS

Recommendation

This is a baseline read-out on the submitted sample.

Sample Number    Client Info    PCA0110269        Sample Date    Client Info    0        Machine Age    mls    Client Info    0        Oil Age    mls    Client Info    0        Sample Status    Client Info    N/A         Sample Status    Client Info    N/A         Sample Status    Method    Imit/base    current    history1    History2      Water    WC Method    NEG         Iron    ppm    ASTM D5185m    >5    0        Nickel    ppm    ASTM D5185m    >5    0        Sliver    ppm    ASTM D5185m    >5    0        Aluminum    ppm    ASTM D5185m    >5    0        Aluminum    ppm    ASTM D5185m    >5    0        Copper    ppm    ASTM
Sample Date      Client Info      23 Jun 2024          Machine Age      mls      Client Info      0          Oil Age      mls      Client Info      0          Oil Changed      Client Info      N/A          Sample Status      Imit/base      current      history1      history2        Water      WC Method      NEG          WEAR METALS      method      imit/base      current      history1      history2        Iron      ppm      ASTM D5185m      >5      <1          WEAR METALS      method      imit/base      current      history1      history2        Iron      ppm      ASTM D5185m      >5      <1          Silver      ppm      ASTM D5185m      >5      0          Copper      ppm      ASTM D5185m      >5      0          Chromium      ppm      ASTM D5185m      >5
Machine Age    mls    Client Info    0        Oil Age    mis    Client Info    N/A        Sample Status    Client Info    N/A        CONTAMINATION    method    imit/base    current    history1    history2      Water    WC Method    NEG        WEAR METALS    method    imit/base    current    history1    history2      Iron    ppm    ASTM D5185m    >5    <1        Nickel    ppm    ASTM D5185m    >5    0        Aluminum    ppm    ASTM D5185m    >5    0        Aged    ppm    ASTM D5185m    >5    0        Aluminum    ppm    ASTM D5185m    >5    0        Lead    ppm    ASTM D5185m    >5    0        Vanadium    ppm    ASTM D5185m    5    0        Cadmium
Oil Age      mls      Client Info      0          Oil Changed      Client Info      N/A          Sample Status      Client Info      N/A          CONTAMINATION      method      limit/base      current      history1      history2        Water      WC Method      NEG          WEAR METALS      method      limit/base      current      history1      history2        Iron      ppm      ASTM D5185m      >5      <1          Othornium      ppm      ASTM D5185m      >5      0          Nickel      ppm      ASTM D5185m      >5      0          Silver      ppm      ASTM D5185m      >5      0          Lead      ppm      ASTM D5185m      >5      0          Copper      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5
Sample Status      Imathe Indit/base      Current      history1      history2        Water      WC Method      Imit/base      current      history1      history2        Water      WC Method      Imit/base      current      history1      history2        Water      WC Method      Imit/base      current      history1      history2        Iron      ppm      ASTM D5185m      >5      <1          Nickel      ppm      ASTM D5185m      >5      <1          Aluminum      ppm      ASTM D5185m      >5      0          Aluminum      ppm      ASTM D5185m      >5      0          Lead      ppm      ASTM D5185m      >5      0          Yanadium      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5185m      <0           ASTM D5185m       0 </th
Sample Status      Imathe Indit/base      Current      history1      history2        Water      WC Method      Imit/base      current      history1      history2        Water      WC Method      Imit/base      current      history1      history2        Water      WC Method      Imit/base      current      history1      history2        Iron      ppm      ASTM D5185m      >5      <1          Nickel      ppm      ASTM D5185m      >5      <1          Aluminum      ppm      ASTM D5185m      >5      0          Aluminum      ppm      ASTM D5185m      >5      0          Lead      ppm      ASTM D5185m      >5      0          Yanadium      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5185m      <0           ASTM D5185m       0 </th
Water      WC Method      NEG          WEAR METALS      method      limit/base      current      history1      history2        Iron      ppm      ASTM D5185m      >5      <1          Chromium      ppm      ASTM D5185m      >5      0          Nickel      ppm      ASTM D5185m      >5      <1          Nickel      ppm      ASTM D5185m      >5      0          Aluminum      ppm      ASTM D5185m      >5      0          Lead      ppm      ASTM D5185m      >5      0          Copper      ppm      ASTM D5185m      >5      0          Vanadium      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5185m      0          Maganese      ppm      ASTM D5185m      5          Mol
WEAR METALS      method      limit/base      current      history1      history2        Iron      ppm      ASTM D5185m      >5      <1          Chromium      ppm      ASTM D5185m      >5      0          Nickel      ppm      ASTM D5185m      >5      <1          Titanium      ppm      ASTM D5185m      >5      0          Aluminum      ppm      ASTM D5185m      >5      0          Lead      ppm      ASTM D5185m      >5      0          Copper      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5185m      >5      0          ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185m      0           Magnesium      ppm      ASTM D5185m      5     <
Iron      ppm      ASTM D5185m      >5      <1
Chromium      ppm      ASTM D5185m      >5      0          Nickel      ppm      ASTM D5185m      >5      <1          Titanium      ppm      ASTM D5185m      >5      <1          Silver      ppm      ASTM D5185m      >5      0          Aluminum      ppm      ASTM D5185m      >5      0          Lead      ppm      ASTM D5185m      >5      0          Copper      ppm      ASTM D5185m      >5      0          Tin      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5185m       <1          Maddium      ppm      ASTM D5185m      0           Boron      ppm      ASTM D5185m      0           Molybdenum      ppm      ASTM D5185m
Nickel      ppm      ASTM D5185m      >5      <1
Titanium      ppm      ASTM D5185m      <1
Silver      ppm      ASTM D5185m      >5      0         Aluminum      ppm      ASTM D5185m      >5      2          Lead      ppm      ASTM D5185m      >5      0          Copper      ppm      ASTM D5185m      >5      0          Tin      ppm      ASTM D5185m      >5      0          Vanadium      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5185m       <1          ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185m      0          Molybdenum      ppm      ASTM D5185m      5          Maganese      ppm      ASTM D5185m      781          Magnesium      ppm      ASTM D5185m      1347          Si
Aluminum      ppm      ASTM D5185m      >5      2          Lead      ppm      ASTM D5185m      >5      0          Copper      ppm      ASTM D5185m      >5      0          Tin      ppm      ASTM D5185m      >5      0          Vanadium      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5185m      o           ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185m      101          Molybdenum      ppm      ASTM D5185m      5          Maganese      ppm      ASTM D5185m      781          Calcium      ppm      ASTM D5185m      1347 <td< th=""></td<>
Lead      ppm      ASTM D5185m      >5      0          Copper      ppm      ASTM D5185m      >5      0          Tin      ppm      ASTM D5185m      >5      0          Vanadium      ppm      ASTM D5185m      >5      0          Cadmium      ppm      ASTM D5185m       <1          Cadmium      ppm      ASTM D5185m      0           ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185m      101          Molybdenum      ppm      ASTM D5185m      5          Magnesium      ppm      ASTM D5185m      781          Calcium      ppm      ASTM D5185m      1347          Phosphorus      ppm      ASTM D5185m      1287          Sulfur
Copper      ppm      ASTM D5185m      >5      0          Tin      ppm      ASTM D5185m      >5      0          Vanadium      ppm      ASTM D5185m      <1          Cadmium      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      5          Maganesium      ppm      ASTM D5185m      781          Magnesium      ppm      ASTM D5185m      1104          Phosphorus      ppm      ASTM D5185m      1287          Sulfur      ppm      ASTM D5185m
Tin      ppm      ASTM D5185m      >5      0          Vanadium      ppm      ASTM D5185m      <1          Cadmium      ppm      ASTM D5185m      0          ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185m      101          Barium      ppm      ASTM D5185m      0          Molybdenum      ppm      ASTM D5185m      5          Manganese      ppm      ASTM D5185m      5          Magnesium      ppm      ASTM D5185m      781          Calcium      ppm      ASTM D5185m      1104          Phosphorus      ppm      ASTM D5185m      1287          Sulfur      ppm      ASTM D5185m      4706          Sulfur      ppm      ASTM D5185m      2
VanadiumppmASTM D5185m<1
CadmiumppmASTM D5185m0ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m101BariumppmASTM D5185m0MolybdenumppmASTM D5185m5ManganeseppmASTM D5185m5MagnesiumppmASTM D5185m781CalciumppmASTM D5185m1347PhosphorusppmASTM D5185m1104ZincppmASTM D5185m1287SulfurppmASTM D5185m4706SulfurppmASTM D5185m2SoliconppmASTM D5185m<>157SoliumppmASTM D5185m2
ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m101BariumppmASTM D5185m0MolybdenumppmASTM D5185m5ManganeseppmASTM D5185m<1MagnesiumppmASTM D5185m781CalciumppmASTM D5185m1347PhosphorusppmASTM D5185m1104ZincppmASTM D5185m1287SulfurppmASTM D5185m4706SulfurppmASTM D5185m4706SiliconppmASTM D5185m<>157SodiumppmASTM D5185m2
Boron      ppm      ASTM D5185m      101          Barium      ppm      ASTM D5185m      0          Molybdenum      ppm      ASTM D5185m      5          Manganese      ppm      ASTM D5185m      <1          Magnesium      ppm      ASTM D5185m      781          Calcium      ppm      ASTM D5185m      1347          Phosphorus      ppm      ASTM D5185m      1104          Zinc      ppm      ASTM D5185m      1287          Sulfur      ppm      ASTM D5185m      4706          Sulfur      ppm      ASTM D5185m      2          Sulfur      ppm      ASTM D5185m      >15      7          Sulfur      ppm      ASTM D5185m<>15      2
Barium      ppm      ASTM D5185m      0          Molybdenum      ppm      ASTM D5185m      5          Manganese      ppm      ASTM D5185m      <1          Magnesium      ppm      ASTM D5185m      781          Calcium      ppm      ASTM D5185m      1347          Phosphorus      ppm      ASTM D5185m      1104          Zinc      ppm      ASTM D5185m      1287          Sulfur      ppm      ASTM D5185m      4706          Sulfur      ppm      ASTM D5185m      1287          Sulfur      ppm      ASTM D5185m      4706          Sodium      ppm      ASTM D5185m<>15      7          Sodium      ppm      ASTM D5185m      2
Molybdenum      ppm      ASTM D5185m      5          Manganese      ppm      ASTM D5185m      <1
Manganese      ppm      ASTM D5185m      <1
Magnesium      ppm      ASTM D5185m      781          Calcium      ppm      ASTM D5185m      1347          Phosphorus      ppm      ASTM D5185m      1104          Zinc      ppm      ASTM D5185m      1287          Sulfur      ppm      ASTM D5185m      4706          Sulfur      ppm      ASTM D5185m      2          Solicon      ppm      ASTM D5185m      >15      7          Sodium      ppm      ASTM D5185m      2
Calcium      ppm      ASTM D5185m      1347          Phosphorus      ppm      ASTM D5185m      1104          Zinc      ppm      ASTM D5185m      1287          Sulfur      ppm      ASTM D5185m      4706          Sulfur      ppm      ASTM D5185m      4706          CONTAMINANTS      method      limit/base      current      history1      history2        Silicon      ppm      ASTM D5185m<>15      7          Sodium      ppm      ASTM D5185m      2
Phosphorus      ppm      ASTM D5185m      1104          Zinc      ppm      ASTM D5185m      1287          Sulfur      ppm      ASTM D5185m      4706          CONTAMINANTS      method      limit/base      current      history1      history2        Silicon      ppm      ASTM D5185m      >15      7          Sodium      ppm      ASTM D5185m      2
Zinc      ppm      ASTM D5185m      1287          Sulfur      ppm      ASTM D5185m      4706          CONTAMINANTS      method      limit/base      current      history1      history2        Silicon      ppm      ASTM D5185m<>15      7          Sodium      ppm      ASTM D5185m<      2
Sulfur      ppm      ASTM D5185m      4706          CONTAMINANTS      method      limit/base      current      history1      history2        Silicon      ppm      ASTM D5185m<>15      7          Sodium      ppm      ASTM D5185m      2
CONTAMINANTS  method  limit/base  current  history1  history2    Silicon  ppm  ASTM D5185m  >15  7      Sodium  ppm  ASTM D5185m  2
Silicon      ppm      ASTM D5185m      >15      7          Sodium      ppm      ASTM D5185m      2
Sodium      ppm      ASTM D5185m      2
Sodium      ppm      ASTM D5185m      2
INFRA-RED method limit/base current history1 history2
Soot % % *ASTM D7844 0
Nitration Abs/cm *ASTM D7624 5.6
Sulfation      Abs/.1mm      *ASTM D7415      17.9
FLUID DEGRADATION method limit/base current history1 history2
FLUID DEGRADATION  method  limit/base  current  history1  history2    Oxidation  Abs/.1mm  *ASTM D7414  11.7



Viscosity @ 40°C

Acid Number

95 9 85

1.0

0.0

-1.0

KOH/a)

D L L

Acid

## **OIL ANALYSIS REPORT**

\*Visual

\*Visual

scalar

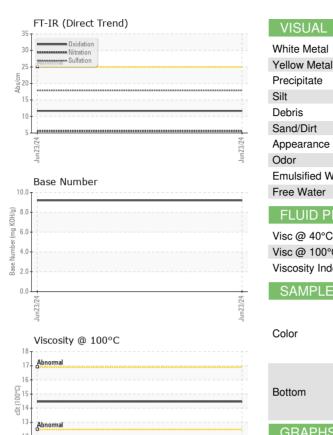
scalar

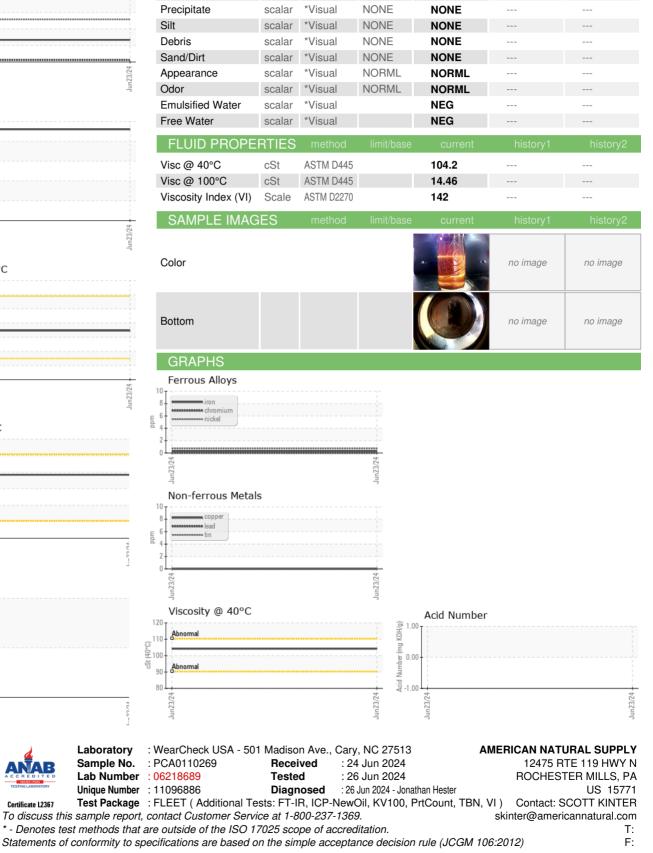
NONE

NONE

VISUAL

un23/24





NONE

NONE

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Certificate 12367

Laboratory

Contact/Location: SCOTT KINTER - AMEROCPA