

Service Report

Page 1 of 1

| | |
|---|--|
| Customer Name: Harris Companies | Marine Job #: ME02382 |
| Contact Person: Ray Lorenzo | Technician: DRAKE CHARLES |
| Contact Ph: (757) 342 3960 | Engine Hours: |
| Work Location: MANCHESTER TERMINAL | |
| <u>Service Call Details</u> 7 ENGINES WITH AN INSPECTION ON 3 OF THEM | |
| Model: C280 | Problem Type: INSPECTIONS |
| Equipment: Generator | Call Type: |
| Equip/Vessel: | Serial No.: o Port o Starboard NKB00177 |

Subject: _____

Service Details

REMOVED THE VALVE COVERS AND LOOKED AT ALL THE VALVE TRAIN. NEXT WE SCOPED CYLINDERS 2,4,6 AND 8. WE PULLED THE ROCKER ARMS AND THEN PULLED THE INJECTORS OUT THEN SCOPED THE CYLINDERS. ALL THE LINERS STILL HAD THEIR CROSS HATCHING WITH NO SIGNS OF WASH OUT OR ANY OTHER DAMAGE. SAME GOES FOR THE PISTONS. OVERALL HEALTH OF THIS ENGINE IS GREAT. ENGINE DOES NOT SEEM TO HAVE ANY LEAKS AND IT ROLLED OVER JUST FINE. CYLINDERS 2,4 AND 6 HAVE A LITTLE BIT OF SURFACE RUST ON THE BOTTOM OF THE HEAD AND ALSO ON THE LINERS THEM SELVES, BUT NOTHING TO BE ALARMED ABOUT. THATS NORMAL FOR HOW LONG THESE ENGINE'S HAVE BEEN SITTING.

Below you can find pictures of the cylinder liners, valves, and piston heads, all showing to be in good condition. The crosshatching in the cylinder liners is in good condition, all valves look to be seated properly, and there are no markings or debris sitting on top of the pistons. There is some slight surface rust that is to be expected with an engine that has not been running. This will clear up without impacting the function or lifespan of the engine.

Authorized Customer Representative (Print)

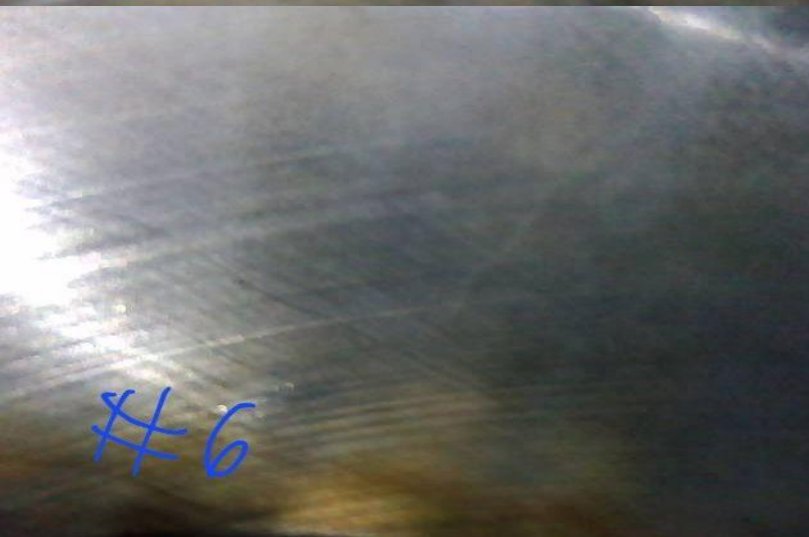
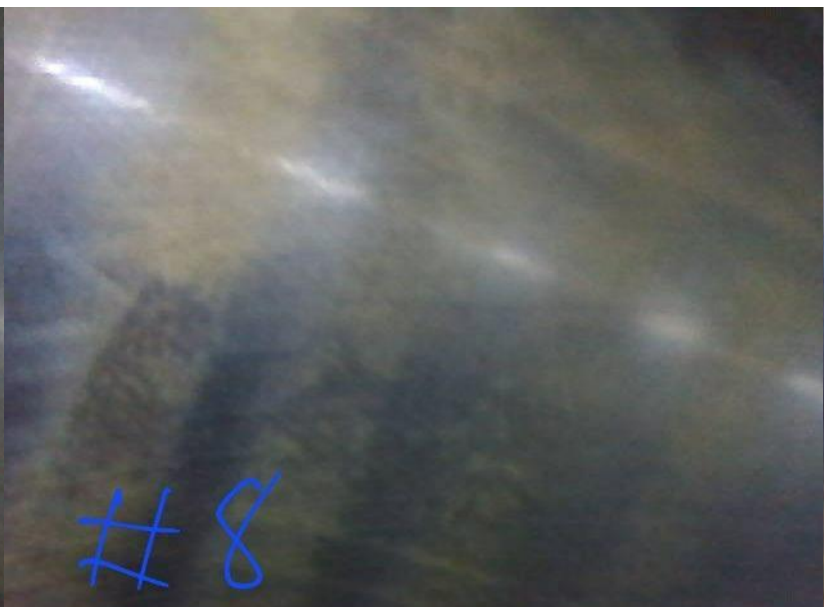
6/26/2023

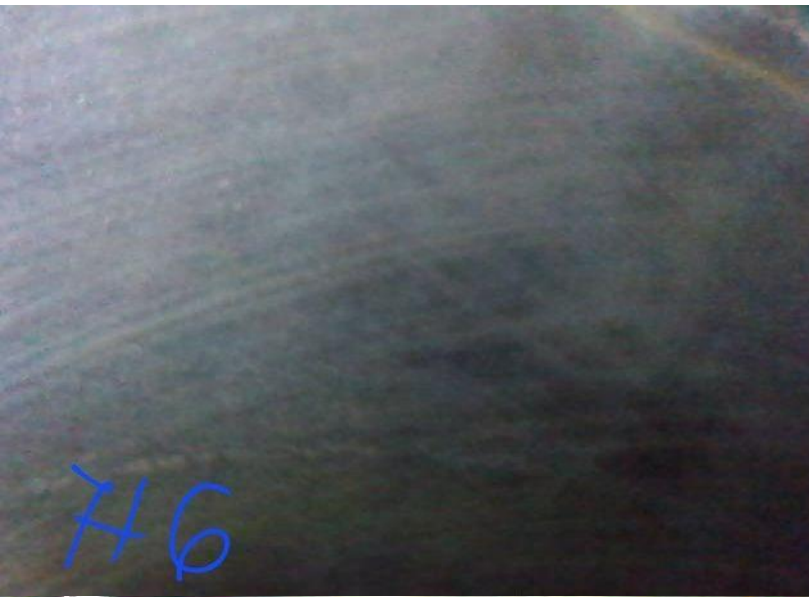
Date

Drake Charles

Technician

Authorized Customer Representative (Signature)









Cylinder # 2



Cylinder # 2



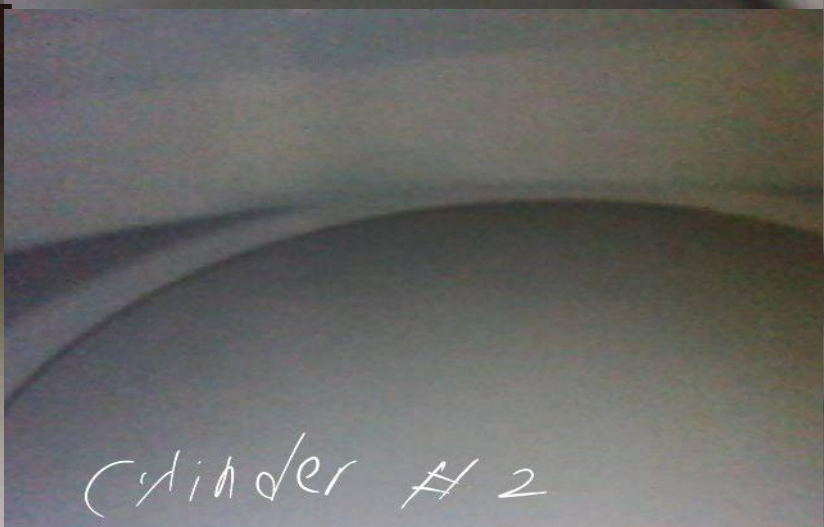
Cylinder # 2



Cylinder # 2



Cylinder # 2



Cylinder # 2



Cylinder #12



Cylinder #2



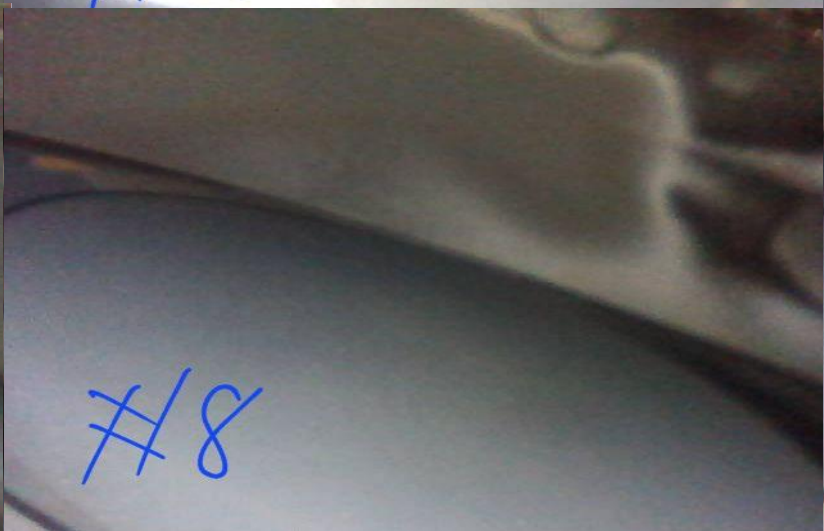
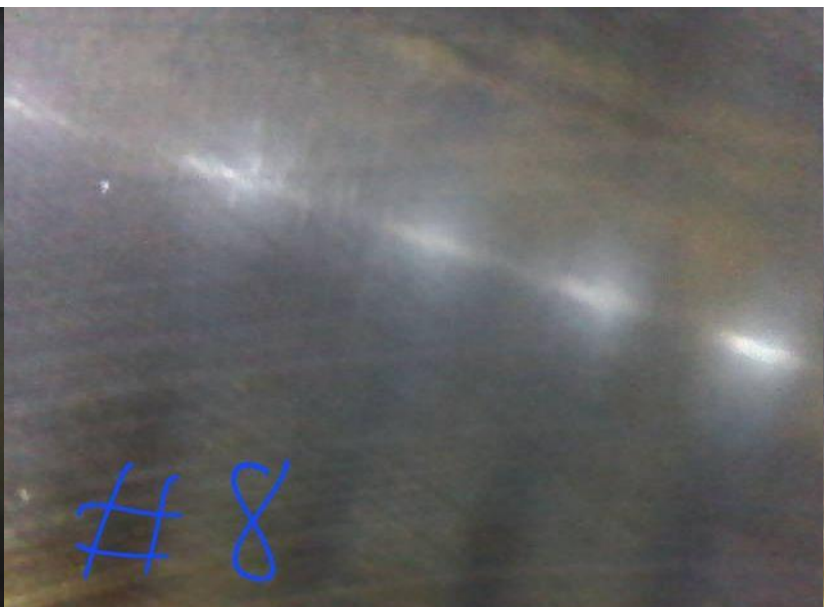
Cylinder #12



Cylinder #12



Engine #2 Cylinder #12





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Page 1 of 1

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| Model: C280 | Problem Type: INSPECTIONS |
| Equipment: Generator | Call Type: |
| Equip/Vessel: | Serial No.: o Port o Starboard NKB00174 |

Subject: _____

Service Details

REMOVED THE VALVE COVERS AND LOOKED AT ALL THE VALVE TRAIN. NEXT WE SCOPED CYLINDERS 15,13,11 AND 9. WE PULLED THE ROCKER ARMS AND THEN PULLED THE INJECTORS OUT THEN SCOPED THE CYLINDERS. ALL THE LINERS STILL HAD THEIR CROSS HATCHING WITH NO SIGNS OF WASH OUT OR ANY OTHER DAMAGE. SAME GOES FOR THE PISTONS. OVERALL HEALTH OF THIS ENGINE IS GREAT. THESE CYLINDERS WERE THE BEST OUT OF THE BUNCH. NOT ONE SINGLE PROBLEM FROM THIS UNIT. AFTER PUTTING EVERYTHING BACK TOGETHER WE ROLLED THE ENGINE OVER WITHOUT ANY PROBLEM.

The pictures below were taken with a bore scope and show the condition of the top of the pistons, cylinder liners, and valves. All look to be in great condition with minimal surface rust. This engine was well preserved and looks to have a lot of life left in it.

 Authorized Customer Representative (Print)

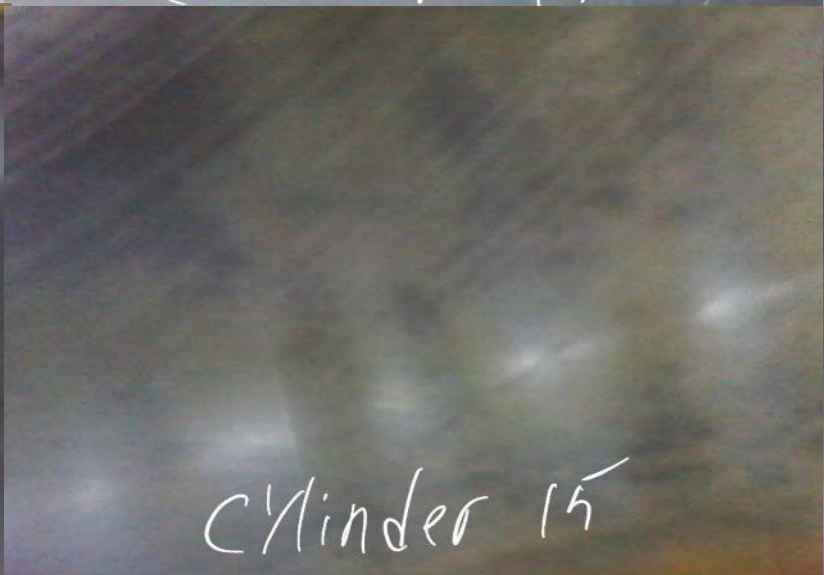
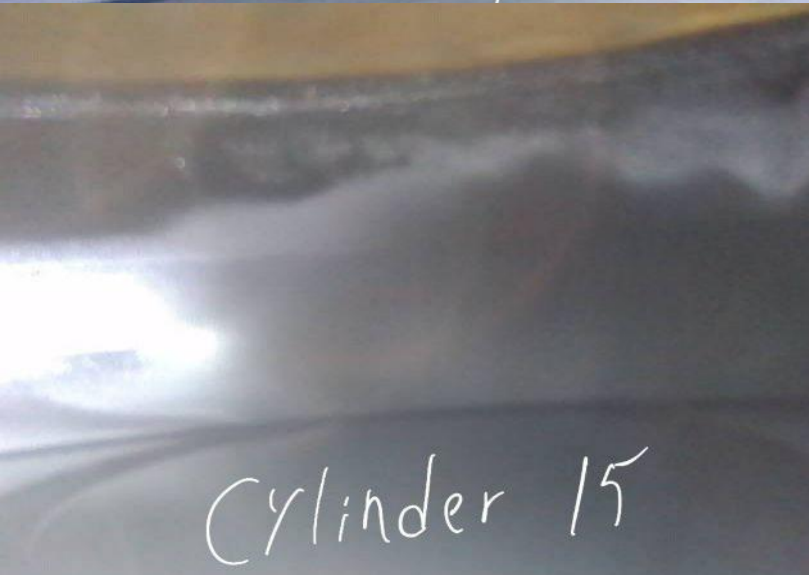
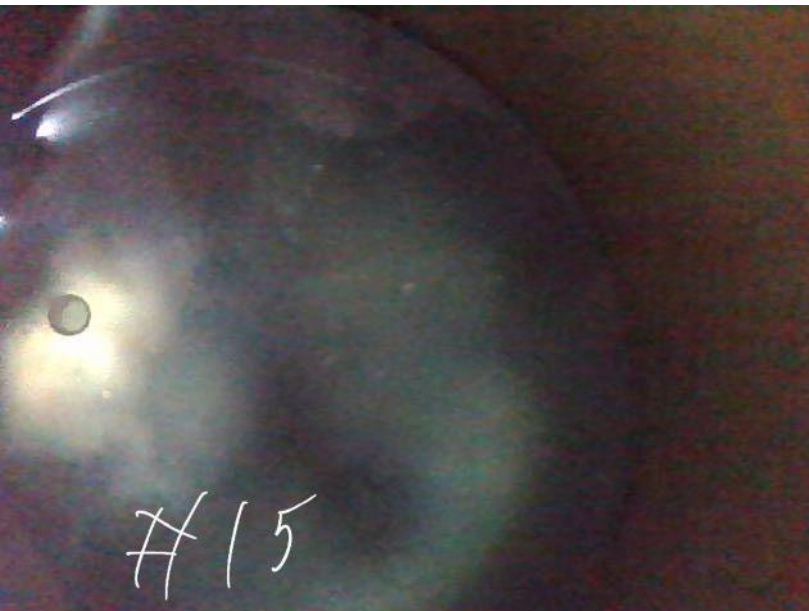
6/26/2023

Date

Drake Charles

Technician

 Authorized Customer Representative (Signature)





Cylinder 15



Cylinder 15



#13



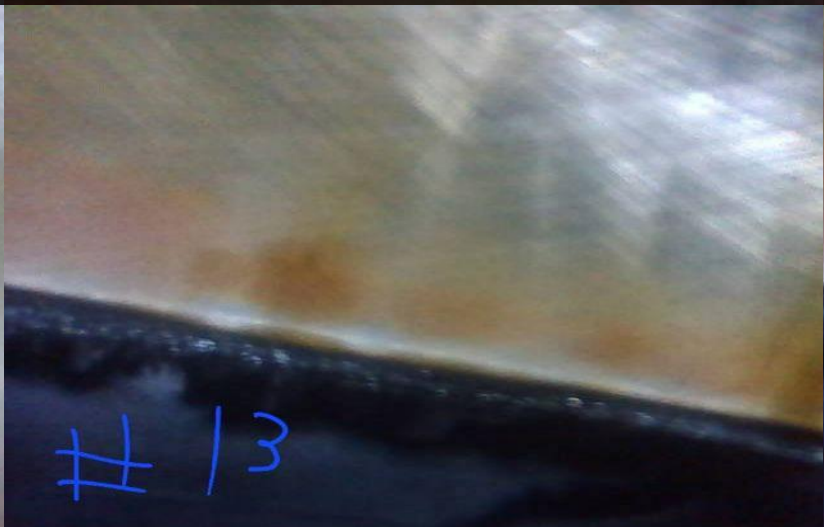
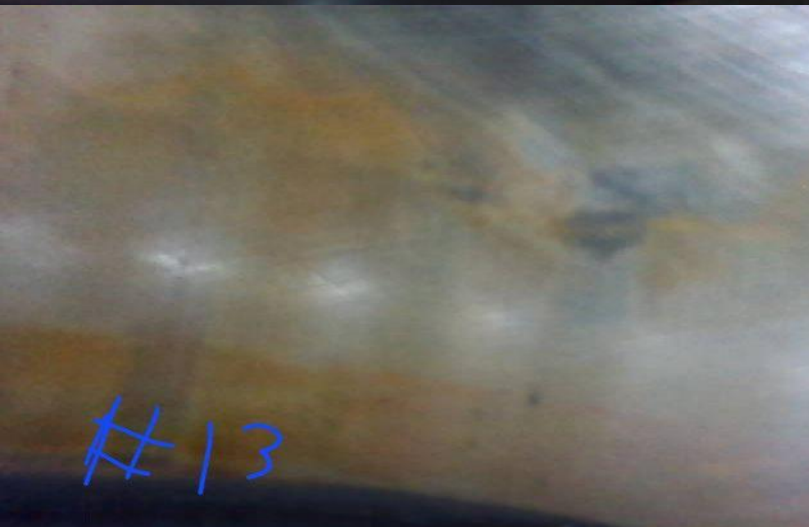
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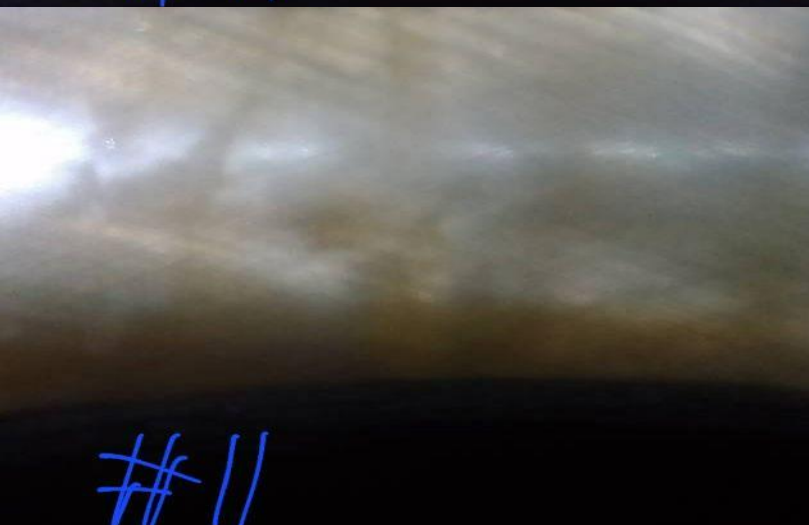
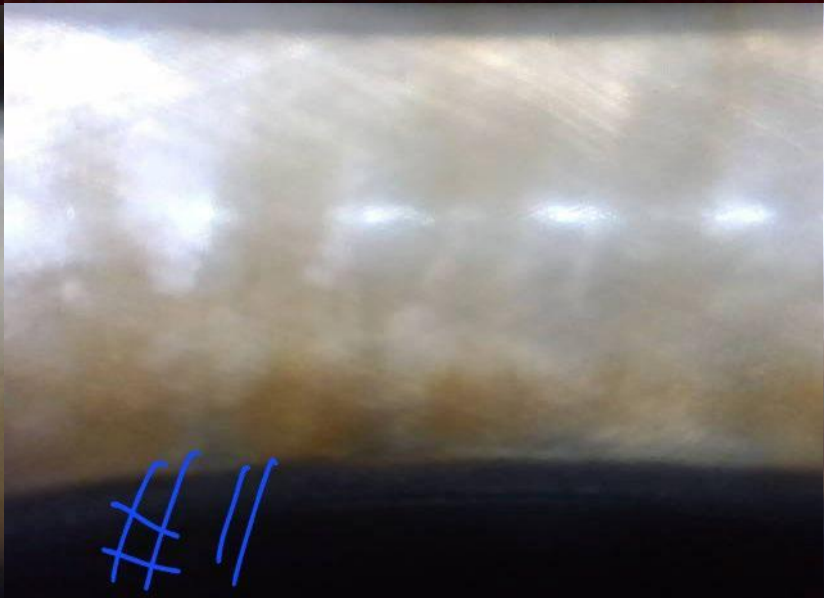


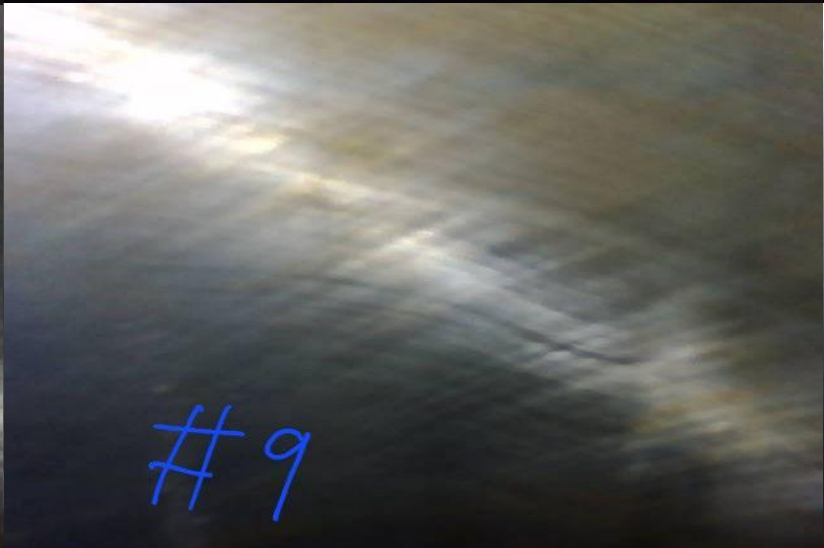
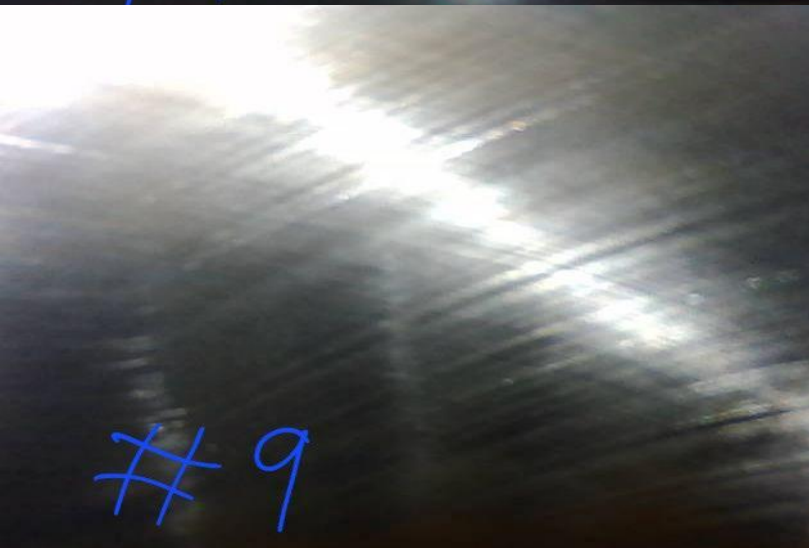
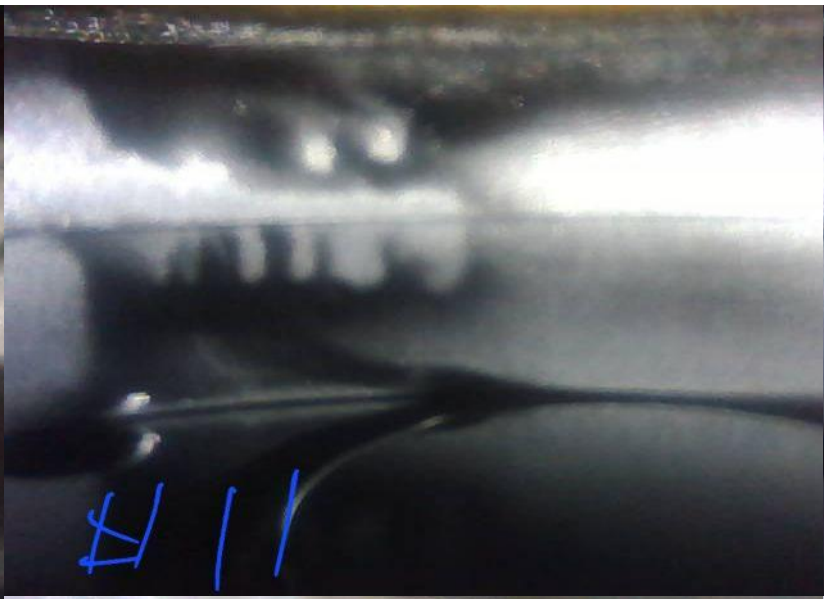
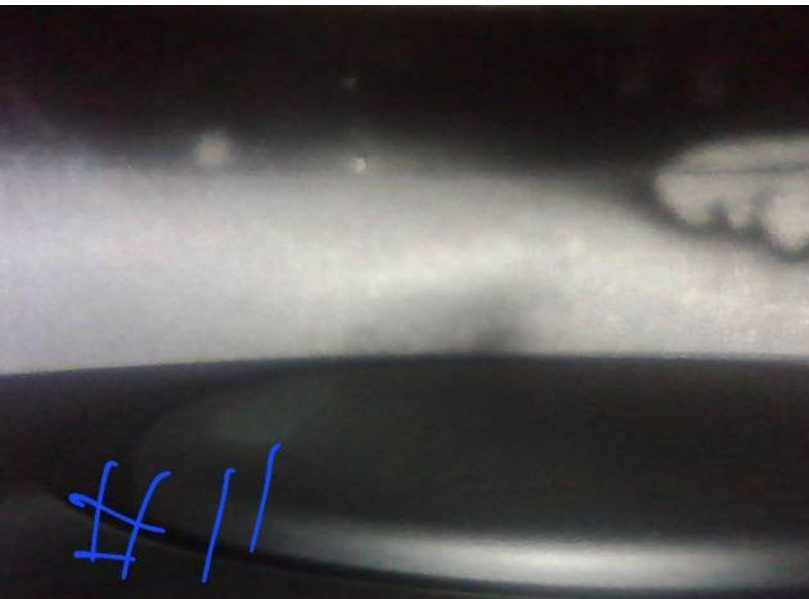
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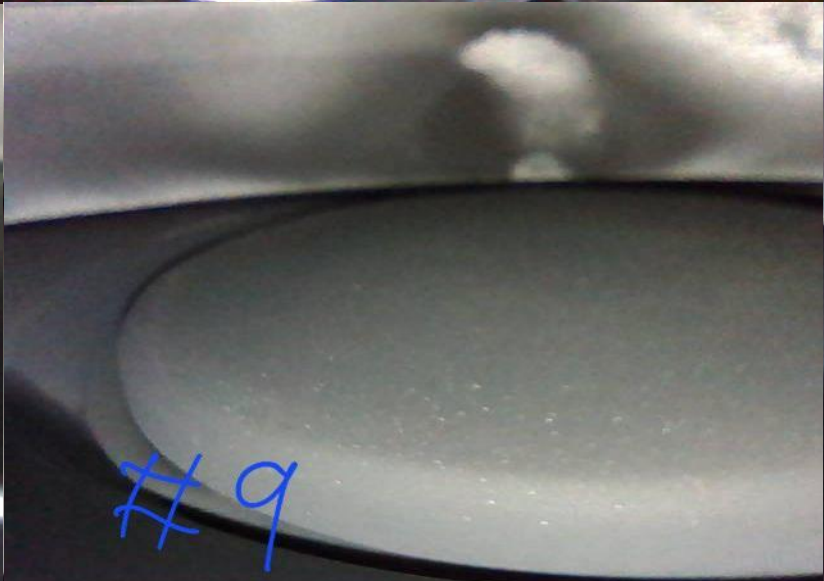
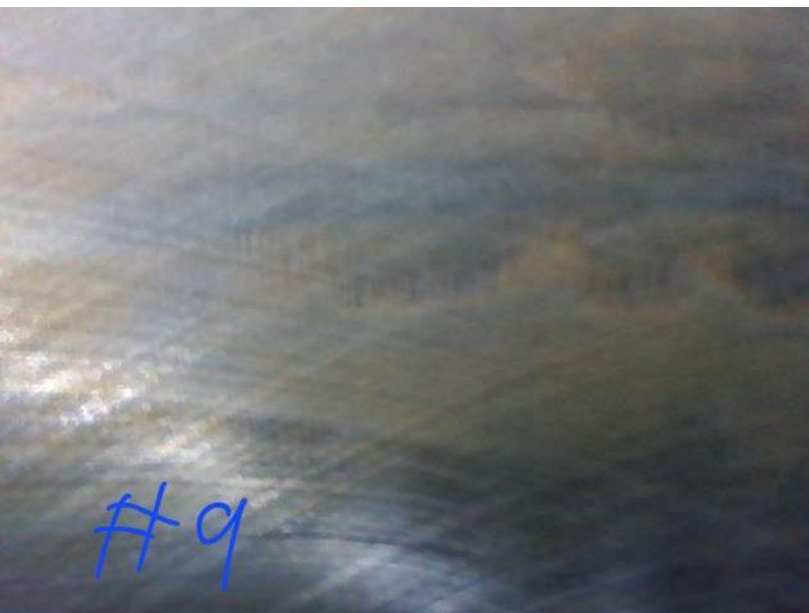


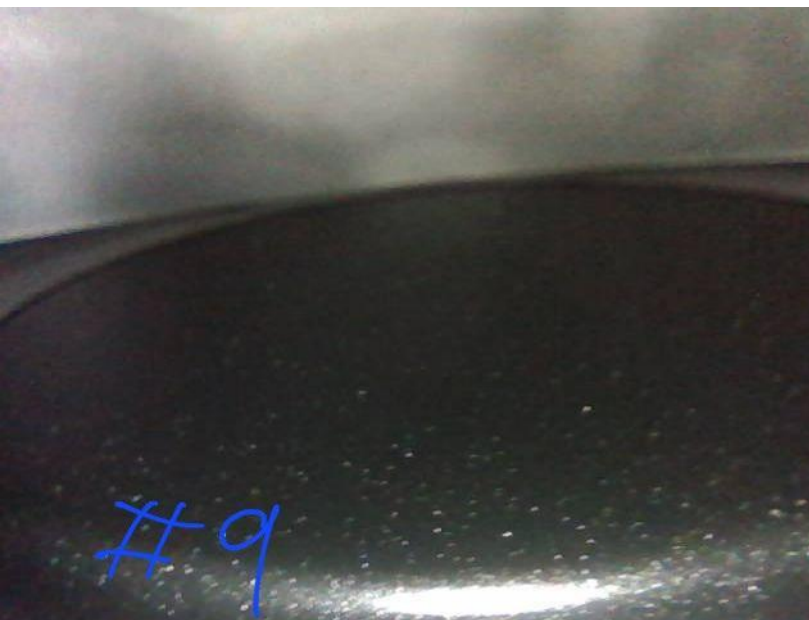
#13













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Page 1 of 1

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| <u>Service Call Details</u> 7 ENGINES WITH AN INSPECTION ON 3 OF THEM | |
| Model: C280 | Problem Type: INSPECTIONS |
| Equipment: Generator | Call Type: |
| Equip/Vessel: | Serial No.: o Port o Starboard NKB00176 |

Subject: _____

Service Details

ROLLED THE ENGINE OVER AFTER CUTTING THE WRAPS OFF THE ENGINE. I ALSO DID A WALK AROUND AND CHECKED FOR ANY SIGNS OF LEAKS OR DAMAGE. NO SIGNS OF LEAKS WHILE DOING MY INSPECTIONS.EVERYTHING LOOKED TO BE IN GOOD CONDITION.

 Authorized Customer Representative (Print)

6/26/2023 Drake Charles

 Date Technician

 Authorized Customer Representative (Signature)







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Page 1 of 1

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| Model: C280 | Problem Type: INSPECTIONS |
| Equipment: Generator | Call Type: |
| Equip/Vessel: | Serial No.: o Port o Starboard NKB00175 |

Subject: _____

Service Details

ROLLED THE ENGINE OVER AFTER CUTTING THE WRAPS OFF THE ENGINE. I ALSO DID A WALK AROUND AND CHECKED FOR ANY SIGNS OF LEAKS OR DAMAGE. NO SIGNS OF LEAKS WHILE DOING MY INSPECTIONS. EVERYTHING LOOKED TO BE IN GOOD CONDITION.

 Authorized Customer Representative (Print)

6/26/2023

Date

Drake Charles

Technician

 Authorized Customer Representative (Signature)

CAT
 SER. NO. NKB00175 ENGINE MODEL C280
 AR NO. 2972552 ROTATION CC
 PERF SPEC 0K8444 MAX ALT 150
 EM NO.
 FULL LOAD FUELING 3205 mm3 FLS (INTERCEPT) 0
 FUEL TIMING 118.2 mm FTS (SLOPE) 0
 POWER 5420 kW AT 1000 RPM ECM SOFTWARE 319609:
 BARE ENGINE HI IDLE 1010 RPM INJECTOR 2882403
 TURBO 2848277
 USE SERVICE TOOL TO VERIFY CURRENT ENGINE SETTINGS 115-5852

SYNCHRONOUS AC GENERATOR

| | | | |
|---------------|----------|--------------|--------|
| SERIAL NUMBER | CODE | MODEL NUMBER | WEIGHT |
| 115-5852 | 115-4700 | AA4M13000 | 15300 |

IMPORTANT: WHEN ORDERING PARTS INCLUDE SERIAL NUMBER AND MODEL NUMBER

| ALTERNATOR | | | | EXCITER | |
|------------|-----------|------------|----------|-------------|-------------|
| KW | PHASE | WIRE | HERTZ | FIELD AMP | FIELD VOLTS |
| 5420 | 3 | 6 | 60 | | |
| KVA | P.F. | RPM | | FIELD VOLTS | FIELD HERTZ |
| 5420 | 0.87 | 1000 | | 240 | 60 |
| VOLTAGE | AMPERES | | | | |
| 2770 | 390 | | | | |
| TEMP. RISE | AMBIENT | INSUL. CL. | SEQUENCE | | |
| | °C | | | | |
| ENCLOSURE | MFR. YEAR | ROTATION | | | |
| | 2010 | | | | |

PERCENT OVERLOAD FOR 1 HOUR IN A 1 HOUR PERIOD

ASSEMBLED IN THE U.S.A. **Kato Engineering**

157-00103-04





engine # 7



engine # 7



engine # 7



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Page 1 of 1

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| Model: C280 | Problem Type: INSPECTIONS |
| Equipment: Generator | Call Type: |
| Equip/Vessel: | Serial No.: o Port o Starboard NKB00178 |

Subject: _____

Service Details

ROLLED THE ENGINE OVER AFTER CUTTING THE WRAPS OFF THE ENGINE. I ALSO DID A WALK AROUND AND CHECKED FOR ANY SIGNS OF LEAKS OR DAMAGE. NO SIGNS OF LEAKS WHILE DOING MY INSPECTIONS. EVERYTHING LOOKED TO BE IN GREAT CONDITION.

 Authorized Customer Representative (Print)

6/26/2023 Drake Charles
 Date Technician

 Authorized Customer Representative (Signature)







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| Model: C280 | Problem Type: INSPECTIONS |
| Equipment: Generator | Call Type: |
| Equip/Vessel: | Serial No.: o Port o Starboard NKB00179 |

Subject: _____

Service Details

ROLLED THE ENGINE OVER AFTER CUTTING THE WRAPS OFF THE ENGINE. I ALSO DID A WALK AROUND AND CHECKED FOR ANY SIGNS OF LEAKS OR DAMAGE. NO SIGNS OF THE LEAKS WHILE DOING MY INSPECTIONS. EVERYTHING LOOKED TO BE IN VERY GOOD CONDITION.

 Authorized Customer Representative (Print)

6/26/2023 Drake Charles

 Date Technician

 Authorized Customer Representative (Signature)