


| | | | | | | | | | |
|--|----------|---|-------|-----------|----|---|------------|----------------|----------------|
| UNIT ID: HAMMERHEAD STAR RIGHT E | |  | | | | MANITOU BOATWORKS _ ENGINEERIN MARC NUGENT 231-649-6776 618 S UNION STREET TRAVERSE CITY , MI 496843249 | | | |
| SECOND ID TIARA S MERCURY | | | | | | | | | |
| UNIT TYPE | | UNLEADED GASOLINE ENGINE | | | | TRACKING # | | 07170U00153 | |
| APPLICATION | | MARINE | | | | MFR | | FORD | |
| LUBE/FLUID MFR | | | | | | MODEL | | 454CID | |
| LUBE TYPE | | SUMP CAPACITY | 00000 | LUBE TIME | 50 | DATE SAMP. | 08/07/2007 | SEVERITY: | 3 |
| GRADE | | HYD SYS PRESS | 00000 | UNIT TIME | 50 | DATE REC. | 08/09/2007 | ACCOUNT No. | 59300006340005 |
| FILTER TYPE | FULLFLOW | MICRON RATING | 015 | LUBE ADD | | DATE COMP. | 08/10/2007 | Loc Lab No. DA | 503620 RNF |

COMMENT Check air induction system (filters, housings, air intake, etc.) for source of abrasives (dirt). Abrasives (Silicon) are at a SIGNIFICANT LEVEL; Lubricant and filter change is suggested if not done at sampling time; Bearing metal is at a MODERATE LEVEL; HIGH IRON and/or CHROME and/or NICKEL could indicate crankshaft/camshaft wear; FUEL DILUTION is at a MINOR LEVEL; We are unable to evaluate lube properties (Additives, Viscosity) due to missing information (Manufacturer, Type _ Grade);

| FLUID ANALYSIS REPORT - 817-834-6321 | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|----|-----------|----|-----|------|------|------|-----|------|-------|--------------------------|-----|-----|-------------------------|----|-----|----|----|-----------------------|------|----|-----|------|-----|
| WEAR METALS - PPM | | | | | | | | | | | CONTAMINANT METALS - PPM | | | MULTI-SOURCE METALS PPM | | | | | ADDITIVE METALS - PPM | | | | | |
| Fe | Cr | Ni | Al | Cu | Pb | Sn | Cd | Ag | Ti | V | Si | Na | K | Mo | Sb | Mn | Li | B | Mg | Ca | Ba | P | Zn | |
| 86 | 2 | 0 | 6 | 53 | 63 | 19 | 5 | 0 | 1 | 0 | 115 | 27 | 17 | 20 | 1 | 12 | 0 | 42 | 11 | 2107 | 1 | 751 | 1029 | |
| AAA | | | | AAA | AAA | AAA | AAA | | | | AAA | | | | | AAA | | | | | | | | |
| DATE | | LUBE UNIT | | L | F | S | W | V | V | T | T | I-R | I-R | I | S | O | 4 | 6 | 10 | 14 | 21 | 38 | 70 | 100 |
| SAMPLED | | LUBE | | U | F | S | W | V | V | T | T | O | O | S | O | D | C | C | C | C | C | C | C | C |
| RECEIVED | | UNIT | | B | E | O | A | I | I | A | A | X | N | O | C | M | M | M | M | M | M | M | M | M |
| | | | | L | E | T | T | S | S | A | A | I | I | D | M | M | M | M | M | M | M | M | M | M |
| | | | | R | E | R | E | E | E | N | N | D | A | E | R | R | R | R | R | R | R | R | R | R |
| | | | | CHG | Vol. | Vol. | Vol. | 40C | 100C | Total | Total | A | A | E | R | R | R | R | R | R | R | R | R | R |
| 08/07/2007 | | 50 | | N | 3.80 | 0.00 | 0.00 | | 9.70 | | | | | | | | | | | | | | | |
| 08/09/2007 | | 50 | | N | AAA | | | | | | | | | | | | | | | | | | | |

Comments are advisory only and are based on the assumption that the sample and data submitted are valid. Missing lube or unit time limits the evaluation. No warranty is expressed or implied.