NOTES:

1) THE COOLANT SYSTEM WILL BE FILLED WITH A 50% ETHELYNE GLYCOL / 50% DISTILLED WATER MIXTURE.

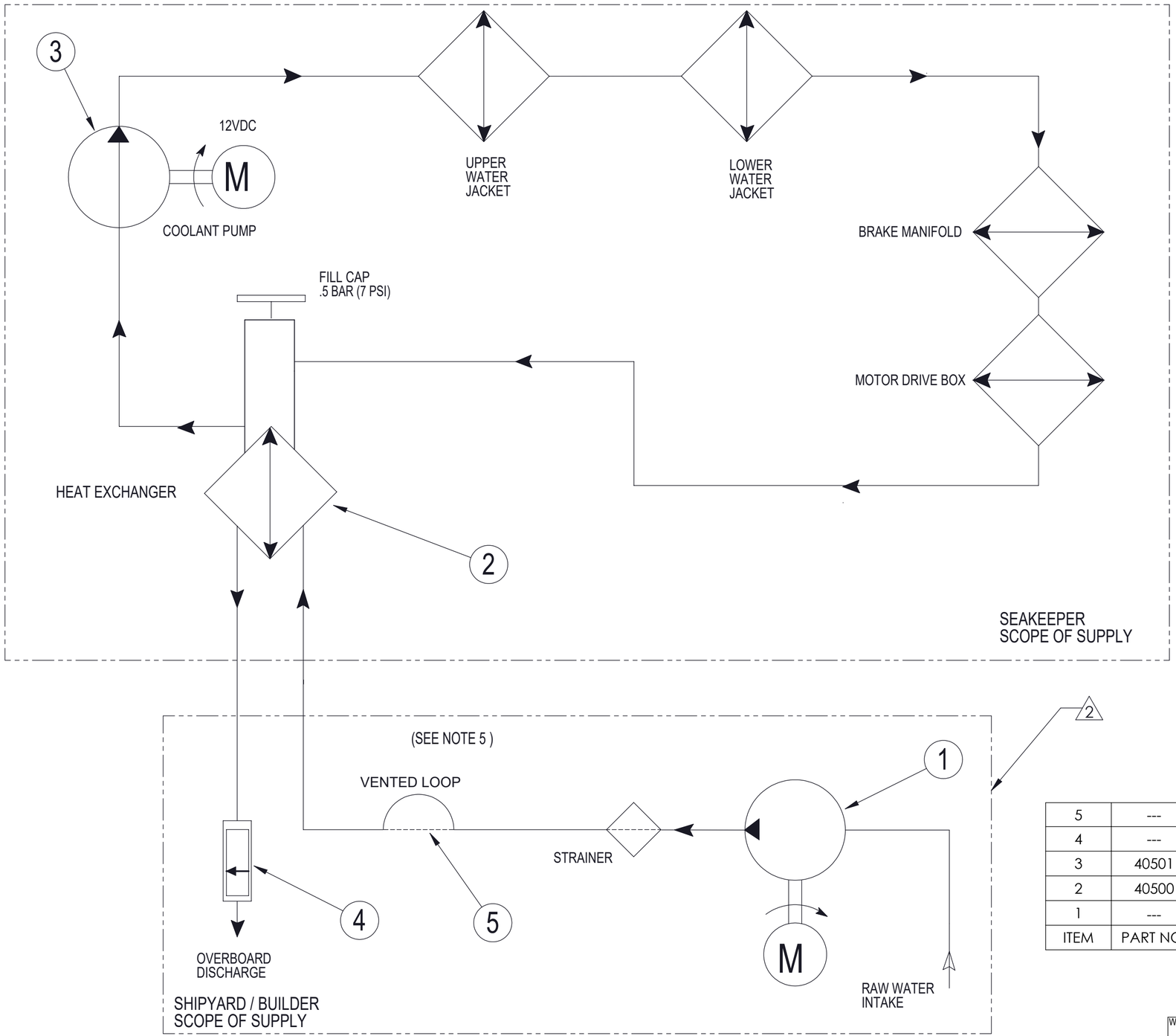
2) SEA WATER FLOW REQUIREMENT THROUGH HEAT EXCHANGER IS 2 GPM (7.6 LPM) MINIMUM AND 6 GPM (22.7 LPM) MAXIMUM UNDER ALL OPERATING CONDITIONS OF THE BOAT. MAXIMUM SEAWATER PRESSURE TO BE 20 PSI (1.4 BAR). WHEN SIZING SEAWATER PUMP, INSTALLER SHOULD FACTOR IN LOSSES FOR RAW WATER PLUMBING. IN ADDITION TO INITIAL OPERATION AT DOCK, NEW GYRO INSTALLATIONS SHOULD BE CHECKED FOR MINIMUM 2 GPM (7.6 LPM) FLOW WHILE VESSEL IS AT SPEED AND WHEN BACKING DOWN.

3) CONNECTIONS FOR SEAWATER INLET /OUTLET ARE 3/4 INCH (19 mm) DIAMETER HOSE BARBS.

4) IF USING POWER FROM GYRO TO OPERATE SEAWATER PUMP, PUMP SHOULD MATCH GYRO INPUT DC VOLTAGE AND DRAW 3 AMPS MAX .

5) A VENTED LOOP IS TO BE INSTALLED IN AN APPROPRIATE LOCATION TO ALLOW AIR PURGING IN THE SEAWATER SUPPLY LINE. INSTALL A FORESPAR MARELON VENTED LOOP P/N 161810 OR SIMILAR, ABOVE THE WATER LINE.

| REV. | ECN NO. | ZONE | DESCRIPTION | DATE | APPROVED |
|---|---|---|---|---|---|
| 1 | | | RELEASED | 14MAY2018 | WHK |
| 2 | | | REMOVED RESTRICTION VALVE AND ADDED A VENTED LOOP. RELOCATED STRAINER TO AFTER PUMP FLOW. ALSO CHANGED TYPE OF PUMP PER TYPICAL INSTALLATION | 14MAY2018 | DDG |
| 3 | 0654 | | CHANGED COOLANT FLOW PATH TO MATCH GYRO | 8/20/2018 | SAC |




| ITEM | PART NO. | DESCRIPTION | SUPPLIED BY |
|---|---|---|---|
| 5 | --- | VENTED LOOP | INSTALLER |
| 4 | --- | SEA WATER FLOW METER | INSTALLER |
| 3 | 40501 | COOLANT CIRCULATION PUMP | SEAKEEPER |
| 2 | 40500 | SEAKEEPER 3 HEAT EXCHANGER | SEAKEEPER |
| 1 | --- | SEAWATER PUMP, SEE NOTE 2 | INSTALLER |




SEAKEEPER

Seakeeper Inc. 44425 Pecan Court, Suite 151 California, MD 20619


WEIGHT - LBS :

MATERIAL:

DRAWN: DDG DATE: 14MAY2018

ENG APPR: DATE:

PROD APPR: DATE:

NAME: SEAKEEPER 2 COOLING WATER SCHEMATIC

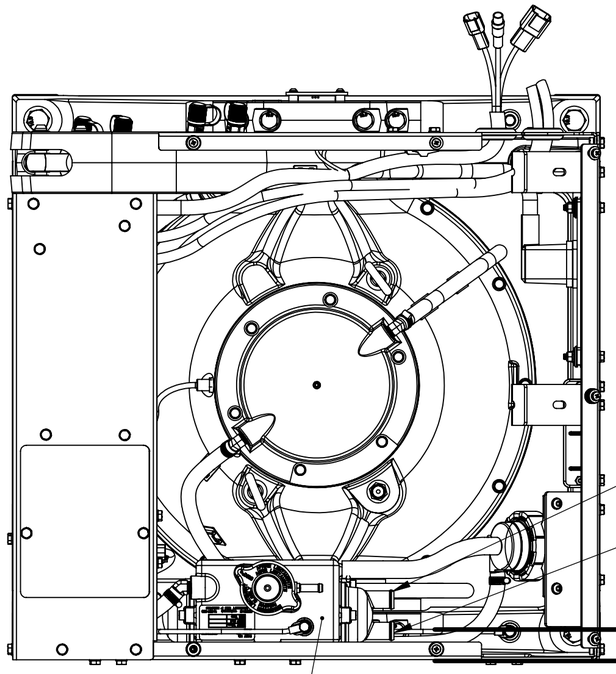
DWG NUMBER 90490

REV. NO. 3

SHEET NO. 1 OF 2

GENERAL RECOMMENDATIONS FOR GYRO COOLING CIRCUIT:

- SEAKEEPER RECOMMENDS A CONTINUOUS DUTY CENTRIFUGAL STYLE PUMP FOR THIS APPLICATION.
- RULE TOURNAMENT SERIES LIVEWELL/BAITWELL PUMP MODEL: 401FC (500GPH) PROVIDES REQUIRED FLOW IN TYPICAL APPLICATIONS.
- A SELF PRIMING PUMP IS NOT A REQUIREMENT IF THE LOCATION OF THE INSTALLED PUMP IS BELOW THE VESSEL WATERLINE.
- SEAWATER PUMP SHOULD BE APPROPRIATELY SIZED TO ACCOUNT FOR PLUMBING LOSSES BETWEEN PICK-UP AND OVERBOARD DISCHARGE.
- THE PUMP MUST NOT BE AT A LOCAL HIGH POINT THAT CAN TRAP AIR AND PREVENT PROPER OPERATION.
- THE DISCHARGE HOSE OF THE PUMP SHOULD BE ROUTED CONTINUOUSLY UPHILL AS MUCH AS PRACTICAL TO ALLOW PUMP TO MAINTAIN PRIME SHOULD A SMALL AMOUNT OF AIR ENTER THE PLUMBING.
- SEAWATER PUMP SHOULD BE RATED FOR SAME MAXIMUM AMBIENT AIR TEMPERATURE (60°C) AS GYRO.
- FOR MULTIPLE GYRO INSTALLATIONS, ONE SEAWATER PUMP PER INSTALLED GYRO IS RECOMMENDED.
- SEAWATER SCOOP INTAKE SHOULD FACE FORWARD AND SHOULD NOT BE LOCATED NEAR PROPELLERS OR BEHIND HULL PROTRUSIONS THAT WILL DISTURB FLOW.
- IF SEAWATER COOLING WATER TO GYRO IS PROVIDED FROM A MULTI-PURPOSE PUMP/CIRCUIT , AN AUTOMATIC SHUT-OFF VALVE SHOULD BE INSTALLED TO PREVENT FLOW THROUGH GYRO HEAT EXCHANGER WHEN GYRO IS NOT IN USE.
- IF MEASURED FLOW FROM DEDICATED OR CENTRAL SEAWATER PUMP IS ABOVE RECOMMENDED LIMITS, A RESTRICTOR VALVE SHOULD BE INSTALLED BETWEEN PUMP AND GYRO HEAT EXCHANGER TO LIMIT FLOW RATE AND EXTEND LIFE OF THE HEAT EXCHANGER.
- SEE SEAKEEPER DRAWING #90487, FOR RECCOMMENDED SEAWATER HOSE ROUTING TO GYRO.



GYRO MODEL SHOWN HERE FOR CONNECTION REFERENCE
HAS PANEL COVERS, SOME HOSES AND OTHER COMPONENTS
REMOVED FOR VISUAL CLARITY.
(TOP VIEW)

SEAWATER OUTLET
3/4" (19mm) HOSE BARB

SEAWATER INLET,
3/4" (19mm) HOSE BARB

HEAT EXCHANGER

MEASURE SEAWATER FLOW RATE HERE
MINIMUM 2GPM AND MAXIMUM 6GPM
USE A FLOW METER OR A BUCKET AND STOP WATCH

OVERBOARD
DISCHARGE

**FLOW ENTERING HEAT EXCHANGER:**
**2 GPM (7.6 LPM) MINIMUM AND**
**6 GPM (22.7 LPM) MAXIMUM AT**
**ALL VESSEL SPEEDS**

STRAINER

VENTED LOOP (2)
RECCOMENDED.
INSTALL ABOVE WATERLINE

SEAWATER PUMP
SEE RECOMMENDATIONS
ABOVE

FORWARD FACING
SCOOP INTAKE

WATER FLOW

UNDERWAY

# TYPICAL SEAWATER COOLING PLUMBING ARRANGEMENT

| SIZE | DWG. NO. | REV |
|---|---|---|
| C | 90490 | 3 |
| SCALE: 1:10 | WEIGHT: --- | SHEET 2 |