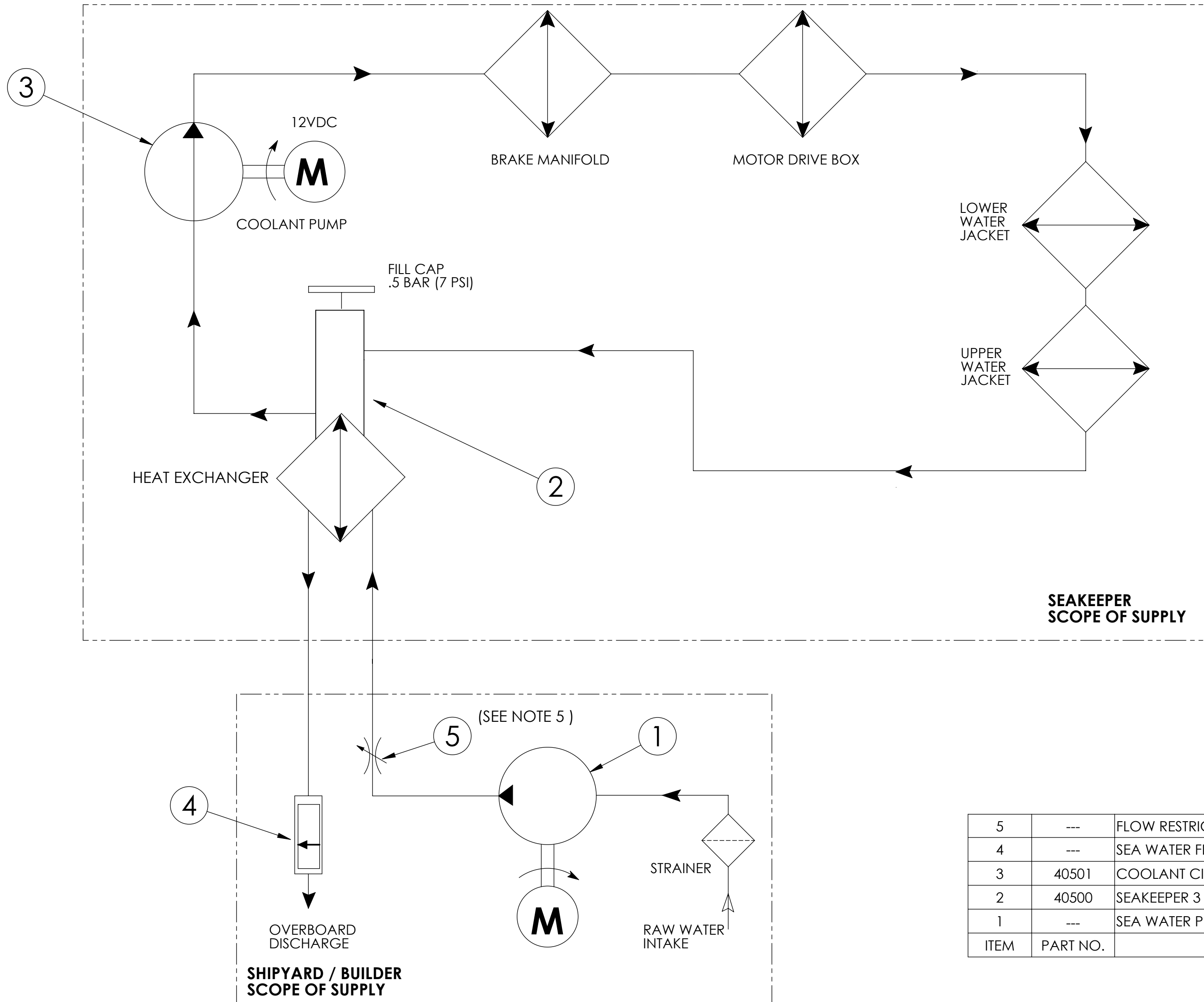


NOTES:

- 1) THE COOLANT SYSTEM WILL BE FILLED WITH A 50% ETHYLENE 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 SEA WATER PRESSURE TO BE 20 PSI (1.4 BAR). WHEN SIZING SEA WATER 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 SEA WATER 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) IF SEA WATER FLOW RATE FROM DEDICATED PUMP OR CENTRAL SYSTEM IS HIGHER THAN MAXIMUM RECOMMENDED VALUE, AN APPROPRIATE RESTRICTOR VALVE SHOULD BE INSTALLED BETWEEN THE PUMP AND THE HEAT EXCHANGER TO DECREASE THE FLOW RATE.

REV.	ECN NO.	ZONE	DESCRIPTION	DATE	APPROVED
1			RELEASED FOR PUBLICATION	4/19/2017	WHK
2			CORRECTED NOTE 4 REGARDING POWER TYPE AND AMP DRAW	7/7/2017	SAC

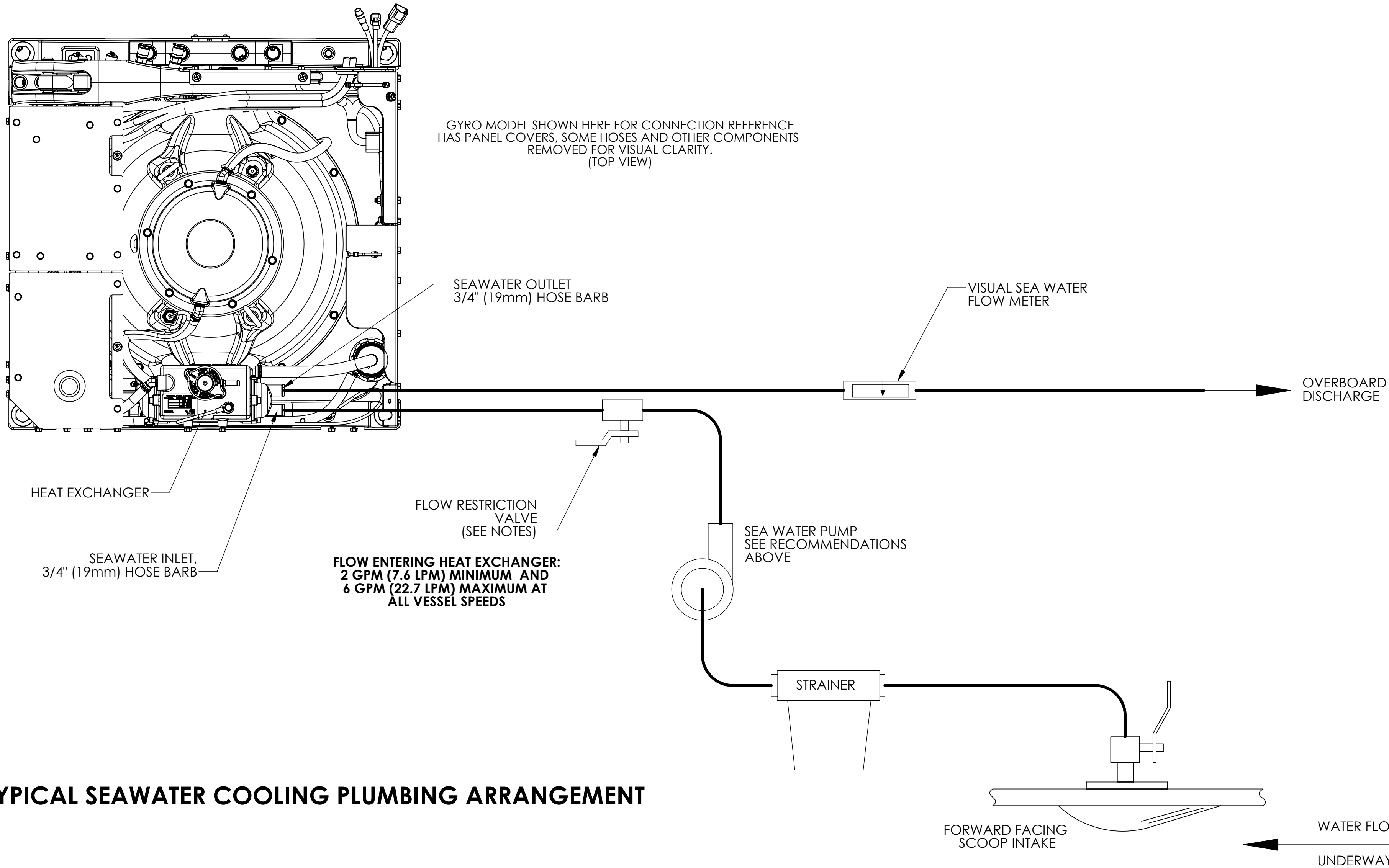


ITEM	PART NO.	DESCRIPTION	SUPPLIED BY
5	---	FLOW RESTRICTION VALVE	INSTALLER
4	---	SEA WATER FLOW METER	INSTALLER
3	40501	COOLANT CIRCULATION PUMP	SEAKEEPER
2	40500	SEAKEEPER 3 HEAT EXCHANGER	SEAKEEPER
1	---	SEA WATER PUMP, SEE NOTE 2	INSTALLER

WEIGHT - LBS :		<b>PROPRIETARY AND CONFIDENTIAL</b>		<b>SEAKEEPER</b> Seakeeper Inc. 44425 Pecan Court, Suite 151 California, MD 20619	
MATERIAL:		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SEAKEEPER INCORPORATED. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SEAKEEPER IS PROHIBITED.			
DRAWN: WHK		DATE: 06 JUN 2016		NAME: SEAKEEPER 3 COOLING WATER SCHEMATIC	
ENG APPR:		DATE:		DWG NUMBER: 90376	
PROD APPR:		DATE:		REV. NO. SHEET NO.: 2 1 OF 2	

GENERAL RECOMMENDATIONS FOR GYRO COOLING CIRCUIT:

- SEAKEEPER RECOMMENDS A CONTINUOUS DUTY CENTRIFUGAL STYLE PUMP FOR THIS APPLICATION.
- A SELF PRIMING PUMP IS NOT A REQUIREMENT IF THE LOCATION OF THE INSTALLED PUMP IS BELOW THE VESSEL WATERLINE.
- SEA WATER 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.
- SEA WATER PUMP SHOULD BE RATED FOR SAME MAXIMUM AMBIENT AIR TEMPERATURE (60°C) AS GYRO.
- FOR MULTIPLE GYRO INSTALLATIONS, ONE SEA WATER PUMP PER INSTALLED GYRO IS RECOMMENDED.
- SEA WATER SCOOP INTAKE SHOULD FACE FORWARD AND SHOULD NOT BE LOCATED NEAR PROPELLERS OR BEHIND HULL PROTRUSIONS THAT WILL DISTURB FLOW.
- IF SEA WATER 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 SEA WATER 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 #90374, SHEET 4 FOR RECOMMENDED SEAWATER HOSE ROUTING TO GYRO.



**TYPICAL SEAWATER COOLING PLUMBING ARRANGEMENT**

SIZE <b>C</b>	DWG. NO. <b>90376</b>	REV <b>2</b>
SCALE: 1:10	WEIGHT: ---	SHEET 2