<ul> <li>NOTES:</li> <li>1) GYRO ASSEMBLY WEIGHT = 3060 LBS. (1388 kg)</li> <li>2) RAW WATER COOLING REQUIREMENT IS 4-8 GPM (15-30 LPM). PROVIDED CONNECTIONS ARE 3/4 INCH Ø (19MM) HOSE BAF USE OF RAW WATER STRAINER IS REQUIRED.</li> <li>F 3) TWO LIFTING EYES ARE PROVIDED ON THE TOP OF THE GYRO FOR USE WITH A CHAIN/SPREADER BAR (SEE SHEET4).</li> <li>4) IF A SOUND ENCLOSURE IS BUILT AROUND THE GYRO ASSEMBLY, A CIRCULATION/EXCHANGE FAN IS RECOMMENDED TO MAINTAIN AIR INSIDE THE SOUND ENCLOSURE AT THE SAME TEMPERATURE AS COMPARTMENT IN WHICH GYRO IS INSTALLED.</li> <li>NOTE THAT 20MM (3/4 INCH) OF CLEARANCE SHOULD BE PROVIDED IN ALL DIRECTIONS BETWEEN ANY ENCLOSURE AND THE GYRO'S SUPPORTING FRAME AND BRAKE MOUNTS AS THE GYRO WILL MOVE SLIGHTLY DURING OPERATION ON IT'S FOUR ISOLATION MOUNTS.</li> <li>5) MUST USE SEAKEEPER ASSY NO.90088, BOND-IN INSTALLATION FIXTURE KIT , PROVIDED WITH GYRO, TO PROPERLY SPACE AND ALIGN SADDLES FOR BONDING PROCESS.</li> </ul>	-	8	7	6		5	
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6) SEE SHEET 2 FOR HULL STRUCTURE INTERFACE DIMENSIONS AND REQUIRED CLEARANCE UNDER UNIT FOR MOVEMENT OF CABLES AND HOSES.

7) SEE REFERENCES 1 THROUGH 6 FOR INSTALLATION INFORMATION.

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REF.	PART NO.	DESCRIPTION	
1	90320	SEAKEEPER 26 GYRO COOLING WATER SCHEMATIC	
2	90310	SEAKEEPER 26 GYRO CABLE BLOCK DIAGRAM	
3	90231	OPERATOR DISPLAY ENVELOPE & MOUNTING INSTRUCTIONS	
4	90088	SEAKEEPER GYRO BOND-IN INSTALLATION FIXTURE KIT	
5	90265	SEAKEEPER 26 GYRO INSTALLATION MANUAL	
6	90085	SEAKEEPER GYRO BOND-IN INSTALLATION KIT	
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	REV NO.	ECN NO.	ZONE		DATE	APPRVD.
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CTURAL SUPPORT		SEE	SHEET	2 FOR GYRO FOUNDATION	DIMENSIO	٧S
ESSEL WATERLINE		see Des	sheet Ign	6 FOR GYRO LOADS FOR H	IULL FOUND	ATION
		SEE	NOTE 4	4 FOR SAFETY/SOUND ENC	LOSURE	

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## **GYRO LOADS FOR STRUCTURAL DESIGN:**

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The Gyro is mounted in a foundation frame which is bolted to four aluminum saddlé fittings made of A356-T6 cast aluminum. The gyro frame incorporates semi-elastic anti-vibration mounts whose intent is to damp vibrations from being transmitted into the hull structure. The saddles are designed to be permanently attached to longitudinal GRP hull beams with a structural adhesive. This mounting arrangement distributes the cyclic, fully reversing forces and moments generated by the Gyro over a large surface area. The bonded-in saddles are **<u>not</u>** designed to be bolted to the hull structure and this method of attachment should never be attempted without consultation with Seakeeper.

The Gyro generates pitch moments, roll moments, yaw moments and vertical and horizontal forces - the magnitude of which is controlled by the Gyro's active brake system. These Gyro generated forces and moments result in loads being applied at the four points, 105mm (4.13 in.) above the saddle fittings as shown in the figure to the right.

The reference point is the center of the pin in each of the anti-vibration mounts. The resultant forces at these points are illustrated on the adjacent figure and values to be used for foundation design are summarized below:

Fz vertical = 35.89kN (8068 lb) Fx Longitudinal = 13.59 kN (3056 lb) Fy Lateral = 7.02 kN (1587 lb)

These forces should be considered to be:

- · Acting simultaneously
- · Fully reversing (i.e., acting in either direction)
- · Repeated an infinite number of times

The boat builder or the gyro installer is responsible for designing the hull foundation to which the gyro is attached to accommodate the above forces and moments plus a reasonable Factor of Safety. A Factor of Safety of 3.0 (Margin of Safety of 2) is suggested.





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