

SOP-GYRE-001 Critical Equipment

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1.0 Purpose

Chapter 10 “Maintenance of Ships and Equipment” establishes the definitions of critical and standby critical equipment and sets forth the guidelines that will ensure all this equipment on our vessels is identified and maintained in readiness at all times.

This SOP lists the critical systems, equipment, standby critical equipment, and recommended spares specific to the R/V Gyre.

2.0 Critical Systems and Equipment

The Company recognizes the importance of all vessel equipment, but has identified the following systems as critical for the R/V Gyre:

Systems: subsystems	Recommended Spares
Ship’s Hull: Hull Internal bulkheads Watertight doors	Damage control kit
Electrical Generation Plant Main generators: Two 250kw Generators D-379 Caterpillar Main switchboard panel	Cylinder head Pistons Nozzle set Automatic Voltage Regulator (AVR) Water pump

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Propulsion Main engines: Two Caterpillar D-398	Spare water pump Spare fuel pump Spare turbocharger Fuel nozzle set
Steering Gear Two Steering pumps/ Vickers	Solenoids set

3.0 Standby Critical Equipment

Air Compressors	Recommended Spares
Pressure Tanks	Filters, compressor oil
Electrical Supply	none

Electrical Generators	Recommended Spares
One Standby generator 6-71 Detroit Diesel electric start	Injector set, fuel pump Electric starter

Lifesaving Appliances	Recommended Spares
Life rafts Life vests	

Firefighting Apparatus	Recommended Spares
Fire pumps Flame detector Fixed fire extinguisher system Fire detection alarm panel	

Communications	Redundancy (no spares)
GMDSS VHF Radios General Alarm Ship's whistle/ horn	EPIRB, VSAT, SART Multiple units and portables, VSAT, Single side band Ship's PA, whistle, horn Portable, manual horns

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Navigation	Recommended Spares
Radar Gyro GPS	None (Redundancy in place)

Bilge Systems	Recommended Spares
Ballast pump	None (redundancy with fire and ballast pumps)
Engine Room, Steering Gear, Bow Thruster Compartment	Float switches for each location
Bilge pump #1 and #2	None (redundancy with fire and ballast pumps)
Oily Water Separator	Solenoids

Ship Security Surveillance and Warning system	Recommended Spares
Cameras	Four (4) Spare cameras and connections

4.0 Maintenance

General maintenance procedures established to ensure their reliability are recorded in the computer-based maintenance program.

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