

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	1 Damage control kit
Electrical Generation Plant Main generators: Two 250kw Generators D-379 Caterpillar Main switchboard panel	1 Cylinder head 2 Pistons 1 Nozzle set 1 Automatic Voltage Regulator (AVR) 1 Water pump

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	1 Pneumatic Starter 1 Fuel Pump Priming 1 Fuel Lines Set 1 Turbo Charger
Propulsion Main engines: Two Caterpillar D-398	1 Spare water pump 1 Spare fuel pump 1 Spare turbocharger 1 Fuel nozzle set 1 Cylinder Head 1 Fuel Pump Injection 1 Fuel Pump Priming 1 Oil Pump 1 Safety Shut-off Device 1 Pneumatic Starter 1 Fuel Lines Set 1 Engine Driven Gear Pump
Steering Gear Two Steering pumps/ Vickers	1 Solenoids set 1 Vickers Solenoid Set 1 Rudder Packing gland 1"

3.0 Standby Critical Equipment

Air Compressors	Recommended Spares
Pressure Tanks	Oil filters Compressor Oil 5 Gls
Electrical Supply	none

Electrical Generators		Recommended Spares	
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One Standby generator 6-71 Detroit Diesel electric start	Injector set, fuel pump Electric starter
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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	EPIRB, VSAT, SART
VHF Radios	Multiple units and portables, VSAT, Single side band
General Alarm	Ship's PA, whistle, horn
Ship's whistle/ horn	Portable, manual horns

Navigation	Recommended Spares
Radar	
Gyro	Redundancy in place
GPS	

Bilge Systems	Recommended Spares
Ballast pump	redundancy with fire and ballast pumps
Engine Room, Steering Gear, Bow Thruster Compartment	Float switches for each location
Bilge pump #1 and #2	redundancy with fire and ballast pumps

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Oily Water Separator	Solenoids
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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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