

## SOP-GYRE-001 Critical Equipment

- 1.0 [Purpose](#)
- 2.0 [Critical Systems & Equipment](#)
- 3.0 [Standby Critical Equipment](#)
- 4.0 [Maintenance](#)

### 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

<b>Title of Document:</b>	Safety Management Manual	<b>Document Number:</b>	SOP-GYRE-001
<b>Authority:</b>	Operations Director	<b>Revision:</b>	5a
<b>Custodian/Owner:</b>	Designated Person Ashore	<b>Issue Date:</b>	June 2025
<b>NOT-CONTROLLED IF PRINTED</b>			Page 1 of 4

	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	
<b>Title of Document:</b>	Safety Management Manual	<b>Document Number:</b>	SOP-GYRE-001
<b>Authority:</b>	Operations Director	<b>Revision:</b>	5a
<b>Custodian/Owner:</b>	Designated Person Ashore	<b>Issue Date:</b>	Nov 2025
<b>NOT-CONTROLLED IF PRINTED</b>			Page 2 of 4

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

<b>Lifesaving Appliances</b>	<b>Recommended Spares</b>
Life rafts Life vests	

<b>Firefighting Apparatus</b>	<b>Recommended Spares</b>
Fire pumps Flame detector Fixed fire extinguisher system Fire detection alarm panel	

<b>Communications</b>	<b>Redundancy (no spares)</b>
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

<b>Navigation</b>	<b>Recommended Spares</b>
Radar Gyro GPS	Redundancy in place

<b>Bilge Systems</b>	<b>Recommended Spares</b>
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

<b>Title of Document:</b>	Safety Management Manual	<b>Document Number:</b>	SOP-GYRE-001
<b>Authority:</b>	Operations Director	<b>Revision:</b>	5a
<b>Custodian/Owner:</b>	Designated Person Ashore	<b>Issue Date:</b>	Nov 2025
<b>NOT-CONTROLLED IF PRINTED</b>			Page 3 of 4

Oily Water Separator	Solenoids
----------------------	-----------

<b>Ship Security Surveillance and Warning system</b>	<b>Recommended Spares</b>
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.

<b>Title of Document:</b>	Safety Management Manual	<b>Document Number:</b>	SOP-GYRE-001
<b>Authority:</b>	Operations Director	<b>Revision:</b>	5a
<b>Custodian/Owner:</b>	Designated Person Ashore	<b>Issue Date:</b>	Nov 2025
<b>NOT-CONTROLLED IF PRINTED</b>			Page 4 of 4