



Product Guide

The Sleipner fault code lookup navigator

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Contents

Online Troubleshooting and Fault Codes	2
Product Fault Codes	
PHC-3 Fault Codes.....	3
SCU Fault codes.....	6
PDC-301 Fault Codes	17
PPC Fault Codes.....	18
eVision and EHP Fault Codes	19
TP-35 Fault Codes	20
VDRI-1 Fault Codes	21
ELS PCU Fault Codes	22
TMU-1 Fault Codes	26
AMS Fault Codes.....	27
150000 Fault codes.....	28
SRC-3 Fault Codes.....	29
AMS-3 Fault Codes	30
Alarm Descriptions	31
Quick Reference S/Link Alarm Codes	33
MK Troubleshooting Guide.....	35
8700 Troubleshooting Guide	36
Sleipner Group Waste Disposal and Recycling Guide	37
Service and Support	38
Product Spare Parts and Additional Resources	38
Warranty Statement	38
Patents	38

Fault Code Navigator

MC_0974

Scan the QR code below to access Sleipner's Fault Code Navigator. Fault codes can be entered in the Fault Code Navigator to receive fault description and guidance on resolving the issue.

A complete list of fault codes and troubleshooting tips can also be downloaded.



www.sleipnergroun.com/support/fault-code-navigator

MC_0020

PHC-3 Fault Codes

MC_0117

Fault Code	Fault Name	Fault Description	Action
106.202.0	Emergency Stop, Bow, -	Bow emergency stop is button activated	-Release bow emergency stop
106.203.0	Emergency Stop, Bow Starboard, -	Bow Starboard emergency stop is button activated	-Release bow starboard emergency stop
106.204.0	Emergency Stop, Bow Port, -	Bow Port emergency stop is button activated	-Release bow port emergency stop
106.205.0	Emergency Stop, Stern, -	Stern emergency stop is button activated	-Release stern emergency stop
106.206.0	Emergency Stop, Stern Starboard, -	Stern Starboard emergency stop is button activated	-Release stern starboard emergency stop
106.207.0	Emergency Stop, Stern Port, -	Stern Port emergency stop is button activated	-Release stern port emergency stop
10500.0.10	PHC Oil Level, -, Level Low	Hydraulic oil level is low	-Limit use of thruster -Inspect hydraulic oil level -Check system for leaks and refill hydraulic oil
10500.0.13	PHC Oil Level, -, Open Circuit	Analog oil level sensor open circuit	-Sensor not connected or wire break. -Verify sensor type in parameter 0201 -Disconnect sensor and measure that sensor resistance value is in range 0-180ohm.
10501.0.11	PHC Oil Temp, -, Level High	Oil temperature higher than 75°C (167°F)	-Limit use of thruster to prevent temperature to rise. -Check if cooling pump is running and there is cooling water flow. -Inspect seawater filter -Verify that cooling pump is enabled in parameter 0301
10501.0.13	PHC Oil Temp, -, Open Circuit	Analog oil temp sensor open circuit	-Sensor not connected or wire break. - Disconnect sensor and measure that sensor resistance value is in range 104ohm-147Kohm -Wrong sensor is defined in parameter 0201
10501.0.16	PHC Oil Temp, -, Short Circuit	Analog oil temp input short circuit	-Input shorted to GND, check wiring/sensor -Disconnect sensor and measure that sensor resistance value is in range 104ohm-147Kohm
10501.0.55	PHC Oil Temp, -, Overtemp	Hydraulic oil temperature has been higher than 120°C (248°F).	-Wait for oil temperature to cool down. -Check oil level and refill if level is low. -Check if cooling pump is running. -Check if cooling system gets water
10502.0.13	PHC Stabilizer Pressure, -, Open Circuit	Stabilizer pressure sensor open circuit	-Sensor not connected or wire break. -System incorrectly configured with stabilizer, parameter 1001 -Replace sensor
10502.0.16	PHC Stabilizer Pressure, -, Short Circuit	Stabilizer pressure sensor short circuit	-Wires shorted or sensor defective, check wiring/sensor -Replace sensor
10502.0.19	PHC Stabilizer Pressure, -, Under Limit	Stabilizer pressure has dropped below 20bar.	-Check accumulator charge pressure -Check PTO pressure (if PTO powered) -Check system for oil leaks -Check generator power supply to the VFD (is VFD motor speed maximum when pressure alarming low)
10502.0.20	PHC Stabilizer Pressure, -, Over Limit	Stabilizer pressure is higher than: parameter 1013 PTO OVER-PRESSURE FAULT LEVEL running from PTO (FW V1.029 an older, set point + 30bar running from PTO) or set point + 15bar running from AC motor	-Check Parameter 1013 PTO OVER-PRESSURE FAULT LEVEL -Check PTO pressure setting -Check accumulator charge pressure -Check unload valve operation
10502.0.26	PHC Stabilizer Pressure, -, VALUE MAX	Stabilizer pressure reached sensor max value.	-Check that correct sensor is fitted -Check that sensor range parameter 1010 match the sensor -Check PTO pressure setting
10502.0.200	PHC Stabilizer Pressure, -, Timeout	Stabilizer pressure has not reached 60% of set point parameter 1003 after 30sec.	-Check pump feed shutoff valve. -Check PTO pressure (if PTO powered) -Check system for oil leaks
10503.0.13	PHC System Pressure, -, Open Circuit	System pressure sensor open circuit	-Sensor not connected or wire break. -Verify system pressure, parameter 0104
10503.0.16	PHC System Pressure, -, Short Circuit	System pressure sensor short circuit	-Wires shorted or sensor defective, check wiring/sensor -Replace sensor
10504.0.13	PHC AI 1, -, Open Circuit	Analog Input 1 (4-20mA) sensor open circuit	-Sensor not connected or wire break.
10504.0.16	PHC AI 1, -, Short Circuit	Analog Input 1 (4-20mA) sensor short circuit	-Wires shorted or sensor defective, check wiring/sensor -Replace sensor
10505.0.13	PHC AI 2, -, Open Circuit	Analog Input 2 (4-20mA) sensor open circuit	-Sensor not connected or wire break.
10505.0.16	PHC AI 2, -, Short Circuit	Analog Input 2 (4-20mA) sensor short circuit	-Wires shorted or sensor defective, check wiring/sensor -Replace sensor
10508.0.13	PHC DOUT AC PUMP UNLOAD, -, Open Circuit	AC Pump Unload valve open circuit	-Check for open circuit, power consumption < 5.0 Watt -System incorrectly configured with stabilizer, parameter 1001
10508.0.51	PHC DOUT AC PUMP UNLOAD, -, Current High	AC Pump Unload valve current higher than 4.0A	-Check wires and connections for short circuit
10509.0.13	PHC DOUT ACCUMULATOR DUMP, -, Open Circuit	Accumulator Dump valve open circuit	-Check for open circuit, power < 5.0 Watt -System incorrectly configured with stabilizer, parameter 1001
10509.0.51	PHC DOUT ACCUMULATOR DUMP, -, Current High	Accumulator Dump valve current higher than 4.0A	-Check wires and connections for short circuit
10510.0.13	PHC DOUT STABILIZER, -, Open Circuit	Stabilizer valve open circuit	-Check for open circuit, power consumption < 5.0 Watt -System incorrectly configured with stabilizer, parameter 1001
10510.0.51	PHC DOUT STABILIZER, -, Current High	Stabilizer valve current higher than 4.0A	-Check wires and connections for short circuit
10511.0.13	PHC DOUT COOLING PUMP HYDRAULIC, -, Open Circuit	Hydraulic Cooling Pump valve open circuit	-Check for open circuit, power consumption < 5.0 Watt -Wrong cooling pump configured, parameter 0301
10511.0.51	PHC DOUT COOLING PUMP HYDRAULIC, -, Current High	Hydraulic Cooling Pump valve current higher than 4.0A	-Check wires and connections for short circuit
10512.0.13	PHC DOUT LS DUMP, -, Open Circuit	LS-Dump valve open circuit	-Check for open circuit, power consumption < 5.0 Watt -System wrong configured with thrusters, parameter 2001 or 2101

Fault Code	Fault Name	Fault Description	Action
10512.0.51	PHC DOUT LS DUMP, -, Current High	LS-Dump valve current higher than 4.0A	-Check wires and connections for short circuit
10513.0.51	PHC DOUT PUMP #2, -, Current High	Pump #2 valve current higher than 4.0A	-Check wires and connections for short circuit
10514.0.13	PHC DOUT 5, -, Open Circuit	Digital Output 5 is configured as crossover and output is open circuit	-Check for open circuit, power consumption < 5.0 Watt -Output configured wrong, parameter 0505
10514.0.51	PHC DOUT 5, -, Current High	Digital Output 5 current higher than 4.0A	-Check wires and connections for short circuit
10515.0.13	PHC DOUT 6, -, Open Circuit	Digital Output 6 is configured as crossover and output is open circuit	-Check for open circuit, power consumption < 5.0 Watt -Output configured wrong, parameter 0506
10515.0.51	PHC DOUT 6, -, Current High	Digital Output 6 current higher than 4.0A	-Check wires and connections for short circuit
10516.0.13	PHC DOUT 3, -, Open Circuit	Digital Output 3 is configured as crossover and output is open circuit	-Check for open circuit, power consumption < 5.0 Watt -Output configured wrong, parameter 0503
10516.0.51	PHC DOUT 3, -, Current High	Digital Output 3 current higher than 4.0A	-Check wires and connections for short circuit
10517.0.13	PHC DOUT 2, -, Open Circuit	Digital Output 2 is configured as crossover and output is open circuit	-Check for open circuit, power consumption < 5.0 Watt -Output configured wrong, parameter 0502
10517.0.51	PHC DOUT 2, -, Current High	Digital Output 2 current higher than 4.0A	-Check wires and connections for short circuit
10518.0.13	PHC DOUT 1, -, Open Circuit	Digital Output 1 is configured as crossover and output is open circuit	-Check for open circuit, power consumption < 5.0 Watt -Output configured wrong, parameter 0501
10518.0.51	PHC DOUT 1, -, Current High	Digital Output 1 current higher than 4.0A	-Check wires and connections for short circuit
10519.0.13	PHC DOUT 4, -, Open Circuit	Digital Output 4 is configured as crossover and output is open circuit	-Check for open circuit, power consumption < 5.0 Watt -Output configured wrong, parameter 0504
10519.0.51	PHC DOUT 4, -, Current High	Digital Output 4 current higher than 4.0A	-Check wires and connections for short circuit
10520.0.51	PHC ECI PUMP POWER FEED, -, Current High	ECI cooling pump power current higher than 8.0A	-Check pump cable for damage and short circuits -Make sure the connector on the cooling pump is correct inserted. -Replace cooling pump
10521.0.51	PHC Bow Thruster Power, -, Current High	Bow thruster PVG feed current higher than 3.0A	-Check PVG wires and connections for short circuit
10522.0.51	PHC Stern Thruster Power, -, Current High	Stern thruster PVG feed current higher than 3.0A	-Check PVG wires and connections for short circuit
10523.0.51	PHC Thruster Power, -, Current High	Bow or Stern PVG feed current higher than 3.3A	Check all bow and stern PVG signal wires for short circuits
10524.0.51	PHC ECI Cooling Pump, -, Current High	ECI cooling pump current higher than 13.0A	-Check ECI cooling pump cable for damage and short circuits -Replace ECI cooling pump
10524.0.53	PHC ECI Cooling Pump, -, Overvoltage	ECI cooling pump overvoltage, voltage higher than 33.0V	-Check PHC-3 input voltage is below 33.0V -Replace ECI cooling pump
10524.0.54	PHC ECI Cooling Pump, -, Undervoltage	ECI cooling pump under voltage, voltage is lower than 18.0V	-Check PHC-3 input voltage is higher than 18.0V -Replace ECI cooling pump
10524.0.55	PHC ECI Cooling Pump, -, Overtemp	ECI cooling pump temperature higher than 100°C (212°F).	-Check ECI cooling pump for damages -Replace ECI cooling pump
10524.0.100	PHC ECI Cooling Pump, -, No Communication	No communication with ECI cooling pump	-Check if ECI pump is connected -Check wires to ECI pump for open circuits -Check power supply cooling pump -Wrong cooling pump configured, parameter 0301
10524.0.205	PHC ECI Cooling Pump, -, HW FAULT	ECI cooling pump hardware fault	-Replace ECI cooling pump
10526.0.0	PHC ECI Cooling Pump Blocked, -, -	ECI cooling pump is blocked	-Reset fault and if fault reappears, cooling pump need service or replacement. -Check pump inlet for obstacles
10527.1.0	VFD Not Ready, Instance 1, -	VFD not ready	-VFD external run enable/power available signal is lost.
10528.1.10	VFD Parameter, Instance 1, Level Low	ABB ACS550 parameter values 2001 or 2002 cannot be a negative value.	-Check ABB ACS550 parameter 2001 and 2002.
10528.1.24	VFD Parameter, Instance 1, Fault	VFD Parameters is wrong	-Check VFD parameter setup -Restore VFD parameter backup -Consult Sleipner dealer
10529.0.19	PHC ECI Cooling Pump Speed, -, Under Limit	ECI pump motor speed under limit. Motor speed is below 100 rpm, or not getting minimum 750 rpm within 3 seconds.	-Check hose for dirt -Check pump inlet for obstacles
10530.0.201	PHC PTO ENGINE INSTANCE, -, INIT FAIL	Parameter 1011-PTO ENGINE INSTANCE is not defined	-Set parameter 1011-PTO ENGINE INSTANCE
10531.0.100	CC MODULE, -, No Communication	No communication with CC Module	-Check if CC Module is connected -Check wires to CC Module for open circuits -Check power supply CC Module
10532.0.24	CC MODULE AC PUMP, -, Fault	The CC Module AC pump circuit is open and pump is not running	-Check if AC generator is running -Check if the AC pump contactor is tripped -Check wires to the pump for open circuit
10533.0.24	CC MODULE DC PUMP, -, Fault	The CC Module DC pump circuit is open and pump is not running	-Check if DC pump contactor has 24VDC -Check if the DC pump contactor is tripped -Check wires to the DC pump for open circuit
10600.202.208	Retract Controller, Bow, INTERLOCK	Retract Interlock Bow	-Check if retract is deployed. -No communication with Retract Controller, check if Retract Controller has power and S-link communication. -Check PHC-3 and Retract Controller for correct setup.
10600.203.208	Retract Controller, Bow Starboard, INTERLOCK	Retract Interlock Bow Starboard	-Check if retract is deployed. -No communication with Retract Controller, check if Retract Controller has power and S-link communication. -Check PHC-3 and Retract Controller for correct setup.

Fault Code	Fault Name	Fault Description	Action
10600.204.208	Retract Controller, Bow Port, INTERLOCK	Retract Interlock Bow Port	-Check if retract is deployed. -No communication with Retract Controller, check if Retract Controller has power and S-link communication. -Check PHC-3 and Retract Controller for correct setup.
10600.205.208	Retract Controller, Stern, INTERLOCK	Retract Interlock Stern	-Check if retract is deployed. -No communication with Retract Controller, check if Retract Controller has power and S-link communication. -Check PHC-3 and Retract Controller for correct setup.
10600.206.208	Retract Controller, Stern Starboard, INTERLOCK	Retract Interlock Stern Starboard	-Check if retract is deployed. -No communication with Retract Controller, check if Retract Controller has power and S-link communication. -Check PHC-3 and Retract Controller for correct setup.
10600.207.208	Retract Controller, Stern Port, INTERLOCK	Retract Interlock Stern Port	-Check if retract is deployed. -No communication with Retract Controller, check if Retract Controller has power and S-link communication. -Check PHC-3 and Retract Controller for correct setup.
36000.1.24	ABB ACS550 FAULT, Instance 1, Fault	ABB ACS550 fault	Se ABB ACS550 drive for more details
36002.1.24	VACON FAULT, Instance 1, Fault	VACON VFD Fault	Se VACON drive for more details
36003.1.24	ABB ACS580 FAULT, Instance 1, Fault	ABB ACS580 fault	Se ABB ACS580 drive for more details
36004.1.24	EHP FAULT, Instance 1, Fault	EHP Fault	-See fault from EHP for more details
36005.1.0	ABB ACS580 WARNING, Instance 1, -	ABB ACS580 has stopped with a warning	-Upload Fault Codes from S-Link Programmer and consult Sleipner dealer
36100.1.0	VFD, Instance 1, -	VFD stopped operation	-Upload Fault Codes from S-Link Programmer and consult Sleipner dealer
36100.1.100	VFD, Instance 1, No Communication	Lost communication with VFD	-VFD not powered up -VFD communication cable not connected or incorrectly wired -On the VFD make sure the RS485 BUS TERMINATION is in ON position
36103.1.0	VFD IN LOCAL, Instance 1, -	VFD in local mode	-Switch VFD to remote mode
36104.1.0	VFD DC Undervoltage, Instance 1, -	VFD has stopped with a DC undervoltage warning	-Check VFD supply voltage when system is running -Check power supply capacity against load requirement -Validate Power Management System
36105.1.0	VFD Run Enable Missing, Instance 1, -	VFD Lost Run Enable signal	-Check Run Enable signal input on VFD
36106.1.0	VFD Start Failed, Instance 1, -	Motor is not starting to run	-Check VFD parameter setup -Consult Sleipner dealer

Fault Code	Description	Cause	Action
100.0.0	System Error, -, -	Internal Error	Consult Sleipner dealer.
100.100.24	System Error, Fin Port, Fault	Phase deviation in motor for fin.	- If problem persist, consult Sleipner dealer.
100.101.24	System Error, Fin Starboard, Fault	Phase deviation in motor for fin.	- If problem persist, consult Sleipner dealer.
100.102.24	System Error, Fin Rear Port, Fault	Phase deviation in motor for fin.	- If problem persist, consult Sleipner dealer.
100.103.24	System Error, Fin Rear Starboard, Fault	Phase deviation in motor for fin.	- If problem persist, consult Sleipner dealer.
100.104.24	System Error, Fin Front Port, Fault	Phase deviation in motor for fin.	- If problem persist, consult Sleipner dealer.
100.105.24	System Error, Fin Front Starboard, Fault	Phase deviation in motor for fin.	- If problem persist, consult Sleipner dealer.
109.0.0	Configuration Error, -, -	Device coding incompatible with connected fins.	Set the device coding to the appropriate coding with S-Link Programmer. Use the manual to see what coding to use with which fin.
201.0.200	NMEA2000 Transmission parameter, -, Timeout	No NMEA2000 (PGN127493) transmission message received for 2 seconds.	Check if GW-X status is OK by checking the GW-X status LED (See GW-X user manual).
Check cabling			
5000.0.0	Backing Detected, -, -	Backing Detected	
5001.0.0	High Speed And Stabilizer Off, -, -	High Speed And Stabilizer Off	
5002.100.30	Service Oil Change, Fin Port, Now	Time for Oil Change	Change oil at the next opportunity
5002.101.30	Service Oil Change, Fin Starboard, Now	Time for Oil Change	Change oil at the next opportunity
5002.102.30	Service Oil Change, Fin Rear Port, Now	Time for Oil Change	Change oil at the next opportunity
5002.103.30	Service Oil Change, Fin Rear Starboard, Now	Time for Oil Change	Change oil at the next opportunity
5002.104.30	Service Oil Change, Fin Front Port, Now	Time for Oil Change	Change oil at the next opportunity
5002.105.30	Service Oil Change, Fin Front Starboard, Now	Time for Oil Change	Change oil at the next opportunity
5002.100.31	Service Oil Change, Fin Port, Within 100 Hours	Time for Oil Change	Change oil within the next 100 hours
5002.101.31	Service Oil Change, Fin Starboard, Within 100 Hours	Time for Oil Change	Change oil within the next 100 hours
5002.102.31	Service Oil Change, Fin Rear Port, Within 100 Hours	Time for Oil Change	Change oil within the next 100 hours
5002.103.31	Service Oil Change, Fin Rear Starboard, Within 100 Hours	Time for Oil Change	Change oil within the next 100 hours
5002.104.31	Service Oil Change, Fin Front Port, Within 100 Hours	Time for Oil Change	Change oil within the next 100 hours
5002.105.31	Service Oil Change, Fin Front Starboard, Within 100 Hours	Time for Oil Change	Change oil within the next 100 hours
5002.100.32	Service Oil Change, Fin Port, Within 200 Hours	Time for Oil Change	Change oil within the next 200 hours
5002.101.32	Service Oil Change, Fin Starboard, Within 200 Hours	Time for Oil Change	Change oil within the next 200 hours
5002.102.32	Service Oil Change, Fin Rear Port, Within 200 Hours	Time for Oil Change	Change oil within the next 200 hours
5002.103.32	Service Oil Change, Fin Rear Starboard, Within 200 Hours	Time for Oil Change	Change oil within the next 200 hours
5002.104.32	Service Oil Change, Fin Front Port, Within 200 Hours	Time for Oil Change	Change oil within the next 200 hours
5002.105.32	Service Oil Change, Fin Front Starboard, Within 200 Hours	Time for Oil Change	Change oil within the next 200 hours
5002.100.33	Service Oil Change, Fin Port, Within 300 Hours	Time for Oil Change	Change oil within the next 300 hours
5002.101.33	Service Oil Change, Fin Starboard, Within 300 Hours	Time for Oil Change	Change oil within the next 300 hours
5002.102.33	Service Oil Change, Fin Rear Port, Within 300 Hours	Time for Oil Change	Change oil within the next 300 hours
5002.103.33	Service Oil Change, Fin Rear Starboard, Within 300 Hours	Time for Oil Change	Change oil within the next 300 hours
5002.104.33	Service Oil Change, Fin Front Port, Within 300 Hours	Time for Oil Change	Change oil within the next 300 hours
5002.105.33	Service Oil Change, Fin Front Starboard, Within 300 Hours	Time for Oil Change	Change oil within the next 300 hours
5002.100.34	Service Oil Change, Fin Port, Within 400 Hours	Time for Oil Change	Change oil within the next 400 hours
5002.101.34	Service Oil Change, Fin Starboard, Within 400 Hours	Time for Oil Change	Change oil within the next 400 hours
5002.102.34	Service Oil Change, Fin Rear Port, Within 400 Hours	Time for Oil Change	Change oil within the next 400 hours
5002.103.34	Service Oil Change, Fin Rear Starboard, Within 400 Hours	Time for Oil Change	Change oil within the next 400 hours
5002.104.34	Service Oil Change, Fin Front Port, Within 400 Hours	Time for Oil Change	Change oil within the next 400 hours
5002.105.34	Service Oil Change, Fin Front Starboard, Within 400 Hours	Time for Oil Change	Change oil within the next 400 hours

Fault Code	Description	Cause	Action
5002.100.35	Service Oil Change, Fin Port, Within 500 Hours	Time for Oil Change	Change oil within the next 500 hours
5002.101.35	Service Oil Change, Fin Starboard, Within 500 Hours	Time for Oil Change	Change oil within the next 500 hours
5002.102.35	Service Oil Change, Fin Rear Port, Within 500 Hours	Time for Oil Change	Change oil within the next 500 hours
5002.103.35	Service Oil Change, Fin Rear Starboard, Within 500 Hours	Time for Oil Change	Change oil within the next 500 hours
5002.104.35	Service Oil Change, Fin Front Port, Within 500 Hours	Time for Oil Change	Change oil within the next 500 hours
5002.105.35	Service Oil Change, Fin Front Starboard, Within 500 Hours	Time for Oil Change	Change oil within the next 500 hours
5003.100.30	Service Change Gear, Fin Port, Now	Time for gear change	Change gear at the next opportunity
5003.101.30	Service Change Gear, Fin Starboard, Now	Time for gear change	Change gear at the next opportunity
5003.102.30	Service Change Gear, Fin Rear Port, Now	Time for gear change	Change gear at the next opportunity
5003.103.30	Service Change Gear, Fin Rear Starboard, Now	Time for gear change	Change gear at the next opportunity
5003.104.30	Service Change Gear, Fin Front Port, Now	Time for gear change	Change gear at the next opportunity
5003.105.30	Service Change Gear, Fin Front Starboard, Now	Time for gear change	Change gear at the next opportunity
5003.100.31	Service Change Gear, Fin Port, Within 100 Hours	Time for gear change	Change gear within the next 100 hours
5003.101.31	Service Change Gear, Fin Starboard, Within 100 Hours	Time for gear change	Change gear within the next 100 hours
5003.102.31	Service Change Gear, Fin Rear Port, Within 100 Hours	Time for gear change	Change gear within the next 100 hours
5003.103.31	Service Change Gear, Fin Rear Starboard, Within 100 Hours	Time for gear change	Change gear within the next 100 hours
5003.104.31	Service Change Gear, Fin Front Port, Within 100 Hours	Time for gear change	Change gear within the next 100 hours
5003.105.31	Service Change Gear, Fin Front Starboard, Within 100 Hours	Time for gear change	Change gear within the next 100 hours
5003.100.32	Service Change Gear, Fin Port, Within 200 Hours	Time for gear change	Change gear within the next 200 hours
5003.101.32	Service Change Gear, Fin Starboard, Within 200 Hours	Time for gear change	Change gear within the next 200 hours
5003.102.32	Service Change Gear, Fin Rear Port, Within 200 Hours	Time for gear change	Change gear within the next 200 hours
5003.103.32	Service Change Gear, Fin Rear Starboard, Within 200 Hours	Time for gear change	Change gear within the next 200 hours
5003.104.32	Service Change Gear, Fin Front Port, Within 200 Hours	Time for gear change	Change gear within the next 200 hours
5003.105.32	Service Change Gear, Fin Front Starboard, Within 200 Hours	Time for gear change	Change gear within the next 200 hours
5003.100.33	Service Change Gear, Fin Port, Within 300 Hours	Time for gear change	Change gear within the next 300 hours
5003.101.33	Service Change Gear, Fin Starboard, Within 300 Hours	Time for gear change	Change gear within the next 300 hours
5003.102.33	Service Change Gear, Fin Rear Port, Within 300 Hours	Time for gear change	Change gear within the next 300 hours
5003.103.33	Service Change Gear, Fin Rear Starboard, Within 300 Hours	Time for gear change	Change gear within the next 300 hours
5003.104.33	Service Change Gear, Fin Front Port, Within 300 Hours	Time for gear change	Change gear within the next 300 hours
5003.105.33	Service Change Gear, Fin Front Starboard, Within 300 Hours	Time for gear change	Change gear within the next 300 hours
5003.100.34	Service Change Gear, Fin Port, Within 400 Hours	Time for gear change	Change gear within the next 400 hours
5003.101.34	Service Change Gear, Fin Starboard, Within 400 Hours	Time for gear change	Change gear within the next 400 hours
5003.102.34	Service Change Gear, Fin Rear Port, Within 400 Hours	Time for gear change	Change gear within the next 400 hours
5003.103.34	Service Change Gear, Fin Rear Starboard, Within 400 Hours	Time for gear change	Change gear within the next 400 hours
5003.104.34	Service Change Gear, Fin Front Port, Within 400 Hours	Time for gear change	Change gear within the next 400 hours
5003.105.34	Service Change Gear, Fin Front Starboard, Within 400 Hours	Time for gear change	Change gear within the next 400 hours
5003.100.35	Service Change Gear, Fin Port, Within 500 Hours	Time for gear change	Change gear within the next 500 hours
5003.101.35	Service Change Gear, Fin Starboard, Within 500 Hours	Time for gear change	Change gear within the next 500 hours

Fault Code	Description	Cause	Action
5005.101.0	Docking Mode Activated, Fin Starboard, -	Docking Mode Activated	
5005.102.0	Docking Mode Activated, Fin Rear Port, -	Docking Mode Activated	
5005.103.0	Docking Mode Activated, Fin Rear Starboard, -	Docking Mode Activated	
5005.104.0	Docking Mode Activated, Fin Front Port, -	Docking Mode Activated	
5005.105.0	Docking Mode Activated, Fin Front Starboard, -	Docking Mode Activated	
5006.0.0	ECO Mode Activated, -, -	Eco Mode Activated.	
10000.100.55	Motor Temp, Fin Port, Overtemp	Motor temp too high on fin.	Verify cooling is nominal and motortemp sensor is working.
10000.101.55	Motor Temp, Fin Starboard, Overtemp	Motor temp too high on fin.	Verify cooling is nominal and motortemp sensor is working.
10000.102.55	Motor Temp, Fin Rear Port, Overtemp	Motor temp too high on fin.	Verify cooling is nominal and motortemp sensor is working.
10000.103.55	Motor Temp, Fin Rear Starboard, Overtemp	Motor temp too high on fin.	Verify cooling is nominal and motortemp sensor is working.
10000.104.55	Motor Temp, Fin Front Port, Overtemp	Motor temp too high on fin.	Verify cooling is nominal and motortemp sensor is working.
10000.105.55	Motor Temp, Fin Front Starboard, Overtemp	Motor temp too high on fin.	Verify cooling is nominal and motortemp sensor is working.
10000.100.59	Motor Temp, Fin Port, Foldback Fault	Motor is running to heavy.	- If problem persist, consult Sleipner dealer.
10000.101.59	Motor Temp, Fin Starboard, Foldback Fault	Motor is running to heavy.	- If problem persist, consult Sleipner dealer.
10000.102.59	Motor Temp, Fin Rear Port, Foldback Fault	Motor is running to heavy.	- If problem persist, consult Sleipner dealer.
10000.103.59	Motor Temp, Fin Rear Starboard, Foldback Fault	Motor is running to heavy.	- If problem persist, consult Sleipner dealer.
10000.104.59	Motor Temp, Fin Front Port, Foldback Fault	Motor is running to heavy.	- If problem persist, consult Sleipner dealer.
10000.105.59	Motor Temp, Fin Front Starboard, Foldback Fault	Motor is running to heavy.	- If problem persist, consult Sleipner dealer.
10003.100.55	Transistor Temperature, Fin Port, Overtemp	IGBT transistor temp on fin too high.	Verify cooling is nominal and temperature sensor is working.
10003.101.55	Transistor Temperature, Fin Starboard, Overtemp	IGBT transistor temp on fin too high.	Verify cooling is nominal and temperature sensor is working.
10003.102.55	Transistor Temperature, Fin Rear Port, Overtemp	IGBT transistor temp on fin too high.	Verify cooling is nominal and temperature sensor is working.
10003.103.55	Transistor Temperature, Fin Rear Starboard, Overtemp	IGBT transistor temp on fin too high.	Verify cooling is nominal and temperature sensor is working.
10003.104.55	Transistor Temperature, Fin Front Port, Overtemp	IGBT transistor temp on fin too high.	Verify cooling is nominal and temperature sensor is working.
10003.105.55	Transistor Temperature, Fin Front Starboard, Overtemp	IGBT transistor temp on fin too high.	Verify cooling is nominal and temperature sensor is working.
10004.100.13	Motor Brake, Fin Port, Open Circuit	No connectin with the actuator break.	Check break wiring. If problem persist, consult Sleipner dealer.
10004.101.13	Motor Brake, Fin Starboard, Open Circuit	No connectin with the actuator break.	Check break wiring. If problem persist, consult Sleipner dealer.
10004.102.13	Motor Brake, Fin Rear Port, Open Circuit	No connectin with the actuator break.	Check break wiring. If problem persist, consult Sleipner dealer.
10004.103.13	Motor Brake, Fin Rear Starboard, Open Circuit	No connectin with the actuator break.	Check break wiring. If problem persist, consult Sleipner dealer.
10004.104.13	Motor Brake, Fin Front Port, Open Circuit	No connectin with the actuator break.	Check break wiring. If problem persist, consult Sleipner dealer.
10004.105.13	Motor Brake, Fin Front Starboard, Open Circuit	No connectin with the actuator break.	Check break wiring. If problem persist, consult Sleipner dealer.
10004.100.50	Motor Brake, Fin Port, Current Low	Undercurrent on motor brake.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.101.50	Motor Brake, Fin Starboard, Current Low	Undercurrent on motor brake.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.102.50	Motor Brake, Fin Rear Port, Current Low	Undercurrent on motor brake.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.103.50	Motor Brake, Fin Rear Starboard, Current Low	Undercurrent on motor brake.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.104.50	Motor Brake, Fin Front Port, Current Low	Undercurrent on motor brake.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.105.50	Motor Brake, Fin Front Starboard, Current Low	Undercurrent on motor brake.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.100.51	Motor Brake, Fin Port, Current High	Fin brake overcurrent.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.101.51	Motor Brake, Fin Starboard, Current High	Fin brake overcurrent.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.102.51	Motor Brake, Fin Rear Port, Current High	Fin brake overcurrent.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.103.51	Motor Brake, Fin Rear Starboard, Current High	Fin brake overcurrent.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.104.51	Motor Brake, Fin Front Port, Current High	Fin brake overcurrent.	Check brake wiring. If problem persists, consult Sleipner dealer.
10004.105.51	Motor Brake, Fin Front Starboard, Current High	Fin brake overcurrent.	Check brake wiring. If problem persists, consult Sleipner dealer.
10101.0.11	Device CPU Temp, -, Level High	CPU temperature higher than 85 degrees.	Ventilate the room were the SCU is placed. Consult Sleipner dealer.
10101.100.55	Device CPU Temp, Fin Port, Overtemp	Fin controller CPU temp too high.	Verify that cooling is nominal and ventilation sufficient.
10101.101.55	Device CPU Temp, Fin Starboard, Overtemp	Fin controller CPU temp too high.	Verify that cooling is nominal and ventilation sufficient.
10101.102.55	Device CPU Temp, Fin Rear Port, Overtemp	Fin controller CPU temp too high.	Verify that cooling is nominal and ventilation sufficient.
10101.103.55	Device CPU Temp, Fin Rear Starboard, Overtemp	Fin controller CPU temp too high.	Verify that cooling is nominal and ventilation sufficient.
10101.104.55	Device CPU Temp, Fin Front Port, Overtemp	Fin controller CPU temp too high.	Verify that cooling is nominal and ventilation sufficient.

Fault Code	Description	Cause	Action
10101.105.55	Device CPU Temp, Fin Front Starboard, Overtemp	Fin controller CPU temp too high.	Verify that cooling is nominal and ventilation sufficient.
10200.100.24	System Voltage, Fin Port, Fault	System voltage error.	Verify that circuit breakers are closed, and that the system voltage is nominal.
10200.101.24	System Voltage, Fin Starboard, Fault	System voltage error.	Verify that circuit breakers are closed, and that the system voltage is nominal.
10200.102.24	System Voltage, Fin Rear Port, Fault	System voltage error.	Verify that circuit breakers are closed, and that the system voltage is nominal.
10200.103.24	System Voltage, Fin Rear Starboard, Fault	System voltage error.	Verify that circuit breakers are closed, and that the system voltage is nominal.
10200.104.24	System Voltage, Fin Front Port, Fault	System voltage error.	Verify that circuit breakers are closed, and that the system voltage is nominal.
10200.105.24	System Voltage, Fin Front Starboard, Fault	System voltage error.	Verify that circuit breakers are closed, and that the system voltage is nominal.
10200.100.53	System Voltage, Fin Port, Overvoltage	Supply voltage for fin is to high.	Check power supply.
10200.101.53	System Voltage, Fin Starboard, Overvoltage	Supply voltage for fin is to high.	Check power supply.
10200.102.53	System Voltage, Fin Rear Port, Overvoltage	Supply voltage for fin is to high.	Check power supply.
10200.103.53	System Voltage, Fin Rear Starboard, Overvoltage	Supply voltage for fin is to high.	Check power supply.
10200.104.53	System Voltage, Fin Front Port, Overvoltage	Supply voltage for fin is to high.	Check power supply.
10200.105.53	System Voltage, Fin Front Starboard, Overvoltage	Supply voltage for fin is to high.	Check power supply.
10200.100.54	System Voltage, Fin Port, Undervoltage	Battery undervoltage for fin.	Verify that battery is charged.
10200.101.54	System Voltage, Fin Starboard, Undervoltage	Battery undervoltage for fin.	Verify that battery is charged.
10200.102.54	System Voltage, Fin Rear Port, Undervoltage	Battery undervoltage for fin.	Verify that battery is charged.
10200.103.54	System Voltage, Fin Rear Starboard, Undervoltage	Battery undervoltage for fin.	Verify that battery is charged.
10200.104.54	System Voltage, Fin Front Port, Undervoltage	Battery undervoltage for fin.	Verify that battery is charged.
10200.105.54	System Voltage, Fin Front Starboard, Undervoltage	Battery undervoltage for fin.	Verify that battery is charged.
10210.100.53	Operating Voltage, Fin Port, Overvoltage	Fin controller supply voltage too high.	Check voltage on low-voltage battery.
10210.101.53	Operating Voltage, Fin Starboard, Overvoltage	Fin controller supply voltage too high.	Check voltage on low-voltage battery.
10210.102.53	Operating Voltage, Fin Rear Port, Overvoltage	Fin controller supply voltage too high.	Check voltage on low-voltage battery.
10210.103.53	Operating Voltage, Fin Rear Starboard, Overvoltage	Fin controller supply voltage too high.	Check voltage on low-voltage battery.
10210.104.53	Operating Voltage, Fin Front Port, Overvoltage	Fin controller supply voltage too high.	Check voltage on low-voltage battery.
10210.105.53	Operating Voltage, Fin Front Starboard, Overvoltage	Fin controller supply voltage too high.	Check voltage on low-voltage battery.
10301.100.20	Motor Position, Fin Port, Over Limit	Fin position overshoots expected position	-If problem persist, consult Sleipner dealer.
10301.101.20	Motor Position, Fin Starboard, Over Limit	Fin position overshoots expected position	-If problem persist, consult Sleipner dealer.
10301.102.20	Motor Position, Fin Rear Port, Over Limit	Fin position overshoots expected position	-If problem persist, consult Sleipner dealer.
10301.103.20	Motor Position, Fin Rear Starboard, Over Limit	Fin position overshoots expected position	-If problem persist, consult Sleipner dealer.
10301.104.20	Motor Position, Fin Front Port, Over Limit	Fin position overshoots expected position	-If problem persist, consult Sleipner dealer.
10301.105.20	Motor Position, Fin Front Starboard, Over Limit	Fin position overshoots expected position	-If problem persist, consult Sleipner dealer.
10301.100.22	Motor Position, Fin Port, Out of position	Fin is in a unexpected position.	Verify the encoder, do new fin installation if encoder has been remounted on actuator. Verify that the actuator break is ok. If problem persists, consult Sleipner dealer.
10301.101.22	Motor Position, Fin Starboard, Out of position	Fin is in a unexpected position.	Verify the encoder, do new fin installation if encoder has been remounted on actuator. Verify that the actuator break is ok. If problem persists, consult Sleipner dealer.
10301.102.22	Motor Position, Fin Rear Port, Out of position	Fin is in a unexpected position.	Verify the encoder, do new fin installation if encoder has been remounted on actuator. Verify that the actuator break is ok. If problem persists, consult Sleipner dealer.
10301.103.22	Motor Position, Fin Rear Starboard, Out of position	Fin is in a unexpected position.	Verify the encoder, do new fin installation if encoder has been remounted on actuator. Verify that the actuator break is ok. If problem persists, consult Sleipner dealer.
10301.104.22	Motor Position, Fin Front Port, Out of position	Fin is in a unexpected position.	Verify the encoder, do new fin installation if encoder has been remounted on actuator. Verify that the actuator break is ok. If problem persists, consult Sleipner dealer.
10301.105.22	Motor Position, Fin Front Starboard, Out of position	Fin is in a unexpected position.	Verify the encoder, do new fin installation if encoder has been remounted on actuator. Verify that the actuator break is ok. If problem persists, consult Sleipner dealer.
10301.100.209	Motor Position, Fin Port, MOTION FAULT	Wrong fin motion detected during centering	Verify the encoder, do new fin installation if encoder has been remounted on actuator. If problem persist, consult Sleipner dealer.
10301.101.209	Motor Position, Fin Starboard, MOTION FAULT	Wrong fin motion detected during centering	Verify the encoder, do new fin installation if encoder has been remounted on actuator. If problem persist, consult Sleipner dealer.

Fault Code	Description	Cause	Action
10301.102.209	Motor Position, Fin Rear Port, MOTION FAULT	Wrong fin motion detected during centering	Verify the encoder, do new fin installation if encoder has been remounted on actuator. If problem persist, consult Sleipner dealer.
10301.103.209	Motor Position, Fin Rear Starboard, MOTION FAULT	Wrong fin motion detected during centering	Verify the encoder, do new fin installation if encoder has been remounted on actuator. If problem persist, consult Sleipner dealer.
10301.104.209	Motor Position, Fin Front Port, MOTION FAULT	Wrong fin motion detected during centering	Verify the encoder, do new fin installation if encoder has been remounted on actuator. If problem persist, consult Sleipner dealer.
10301.105.209	Motor Position, Fin Front Starboard, MOTION FAULT	Wrong fin motion detected during centering	Verify the encoder, do new fin installation if encoder has been remounted on actuator. If problem persist, consult Sleipner dealer.
10304.100.201	Motor Aligning, Fin Port, INIT FAIL	Init failed during motor alignment for fin.	- If problem persist, consult Sleipner dealer.
10304.101.201	Motor Aligning, Fin Starboard, INIT FAIL	Init failed during motor alignment for fin.	- If problem persist, consult Sleipner dealer.
10304.102.201	Motor Aligning, Fin Rear Port, INIT FAIL	Init failed during motor alignment for fin.	- If problem persist, consult Sleipner dealer.
10304.103.201	Motor Aligning, Fin Rear Starboard, INIT FAIL	Init failed during motor alignment for fin.	- If problem persist, consult Sleipner dealer.
10304.104.201	Motor Aligning, Fin Front Port, INIT FAIL	Init failed during motor alignment for fin.	- If problem persist, consult Sleipner dealer.
10304.105.201	Motor Aligning, Fin Front Starboard, INIT FAIL	Init failed during motor alignment for fin.	- If problem persist, consult Sleipner dealer.
10304.100.212	Motor Aligning, Fin Port, Overspeed	Speed for fin is to high during motor aligning	-If problem persist, consult Sleipner dealer.
10304.101.212	Motor Aligning, Fin Starboard, Overspeed	Speed for fin is to high during motor aligning	-If problem persist, consult Sleipner dealer.
10304.102.212	Motor Aligning, Fin Rear Port, Overspeed	Speed for fin is to high during motor aligning	-If problem persist, consult Sleipner dealer.
10304.103.212	Motor Aligning, Fin Rear Starboard, Overspeed	Speed for fin is to high during motor aligning	-If problem persist, consult Sleipner dealer.
10304.104.212	Motor Aligning, Fin Front Port, Overspeed	Speed for fin is to high during motor aligning	-If problem persist, consult Sleipner dealer.
10304.105.212	Motor Aligning, Fin Front Starboard, Overspeed	Speed for fin is to high during motor aligning	-If problem persist, consult Sleipner dealer.
10607.100.0	Actuator Alignment Fault, Fin Port, -	Fin failed to perform motor alignment.	Try again. If it persists, verify that the encoder is not moving during alignment.
10607.101.0	Actuator Alignment Fault, Fin Starboard, -	Fin failed to perform motor alignment.	Try again. If it persists, verify that the encoder is not moving during alignment.
10607.102.0	Actuator Alignment Fault, Fin Rear Port, -	Fin failed to perform motor alignment.	Try again. If it persists, verify that the encoder is not moving during alignment.
10607.103.0	Actuator Alignment Fault, Fin Rear Starboard, -	Fin failed to perform motor alignment.	Try again. If it persists, verify that the encoder is not moving during alignment.
10607.104.0	Actuator Alignment Fault, Fin Front Port, -	Fin failed to perform motor alignment.	Try again. If it persists, verify that the encoder is not moving during alignment.
10607.105.0	Actuator Alignment Fault, Fin Front Starboard, -	Fin failed to perform motor alignment.	Try again. If it persists, verify that the encoder is not moving during alignment.
35000.0.200	GPS signal lost, -, Timeout	No GPS data from GW-1/GW-X received for 3 seconds	Check if GW-X status is ok by checking the GW-X status LED (See GW-X user manual). Check cabling
35000.0.204	GPS signal lost, -, SIGNAL LOST	Acceleration in knots to high indicating a false signal	-Check if system is switching between GPS systems
40000.0.24	Centering failed, -, Fault	Centering failed due to fin actuator alarm.	- Check fin actuator connections.
40000.100.0	Centering failed, Fin Port, -	Fin failed to go to center.	Verify fin not under high load.
40000.101.0	Centering failed, Fin Starboard, -	Fin failed to go to center.	Verify fin not under high load.
40000.102.0	Centering failed, Fin Rear Port, -	Fin failed to go to center.	Verify fin not under high load.
40000.103.0	Centering failed, Fin Rear Starboard, -	Fin failed to go to center.	Verify fin not under high load.
40000.104.0	Centering failed, Fin Front Port, -	Fin failed to go to center.	Verify fin not under high load.
40000.105.0	Centering failed, Fin Front Starboard, -	Fin failed to go to center.	Verify fin not under high load.
40001.0.201	Sensor Fault 1, -, INIT FAIL	Sensor board fault.	Consult Sleipner dealer.
40001.0.202	Sensor Fault 1, -, READ FAIL	Sensor board fault.	Consult Sleipner dealer.
40002.0.201	Sensor Fault 2, -, INIT FAIL	Sensor board fault.	Consult Sleipner dealer.
40002.0.202	Sensor Fault 2, -, READ FAIL	Sensor board fault.	Consult Sleipner dealer.
40003.0.201	Sensor Fault 3, -, INIT FAIL	Sensor board fault.	Consult Sleipner dealer.
40003.0.202	Sensor Fault 3, -, READ FAIL	Sensor board fault.	Consult Sleipner dealer.
40004.0.24	PHC-3, -, Fault	Detected fault on PHC-3	Check PHC-3 faults for more information
40004.0.100	PHC-3, -, No Communication	PHC-3 communication lost for more than 500ms.	Check if PHC-3 is powered and is working Check S-Link cabling
40004.0.200	PHC-3, -, Timeout	PHC-3 startup timed out. Trigger when startup takes longer than 60 seconds	Check if PHC-3 is able to build up the pressure. Check PHC-3 faults for more information. Check PHC-3 system pressure reading when PTO is not running against PHC-3 parameter 1009-PTO PUMP PRESSURE DETECT LEVEL. Check PHC-3 system pressure sensor.
40004.0.210	PHC-3, -, Service Mode	Trigger when the SCU attempts to start PHC-3 and the PHC-3 is running in manual mode.	Stop running the PHC-3 in manual mode
40006.0.24	Sensor Fault 4, -, Fault	Sensor board fault.	Consult Sleipner dealer.
40006.0.150	Sensor Fault 4, -, ID Fault	Sensor board fault.	Consult Sleipner dealer.
40006.0.151	Sensor Fault 4, -, Self-Test Fault	Sensor board fault.	Consult Sleipner dealer.

Fault Code	Description	Cause	Action
40006.0.203	Sensor Fault 4, -, Not Calibrated	Sensor board fault.	Consult Sleipner dealer.
40007.0.100	Sensor Fault 5, -, No Communication	Sensor board fault.	Consult Sleipner dealer.
40007.0.150	Sensor Fault 5, -, ID Fault	Sensor board fault.	Consult Sleipner dealer.
40008.0.24	Sensor Fault 6, -, Fault	Sensor board fault.	Consult Sleipner dealer.
40008.0.206	Sensor Fault 6, -, WRITE FAIL	Internal EEPROM error.	- If problem persist, consult Sleipner dealer.
40009.0.150	Sensor Fault 7, -, ID Fault	Sensor board fault.	Consult Sleipner dealer.
40009.0.151	Sensor Fault 7, -, Self-Test Fault	Sensor board fault.	Consult Sleipner dealer.
40010.0.150	Sensor Fault 8, -, ID Fault	Sensor board fault.	Consult Sleipner dealer.
40011.0.150	Sensor Fault 11, -, ID Fault	Sensor board fault.	Consult Sleipner dealer.
40012.100.51	FIN Current, Fin Port, Current High	Current to fin is too high. Trigger at 10A.	Check cabling between SCU and fin for short circuit.
40012.101.51	FIN Current, Fin Starboard, Current High	Current to fin is too high. Trigger at 10A.	Check cabling between SCU and fin for short circuit.
40012.102.51	FIN Current, Fin Rear Port, Current High	Current to fin is too high. Trigger at 10A.	Check cabling between SCU and fin for short circuit.
40012.103.51	FIN Current, Fin Rear Starboard, Current High	Current to fin is too high. Trigger at 10A.	Check cabling between SCU and fin for short circuit.
40012.104.51	FIN Current, Fin Front Port, Current High	Current to fin is too high. Trigger at 10A.	Check cabling between SCU and fin for short circuit.
40012.105.51	FIN Current, Fin Front Starboard, Current High	Current to fin is too high. Trigger at 10A.	Check cabling between SCU and fin for short circuit.
40013.0.200	Gateway, -, Timeout	No GPS signal, GW-1 not detected on the bus for 3 seconds.	-Check if GW-1 status is ok by checking the GW-1 status LED (See GW-1 user manual). - Check cabling
45000.100.21	FIN Tuning, Fin Port, Failed	Tuning sequence has failed on fin. Triggers if fin movement is less than 50 degrees.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys.
45000.101.21	FIN Tuning, Fin Starboard, Failed	Tuning sequence has failed on fin. Triggers if fin movement is less than 50 degrees.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys.
45000.102.21	FIN Tuning, Fin Rear Port, Failed	Tuning sequence has failed on fin. Triggers if fin movement is less than 50 degrees.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys.
45000.103.21	FIN Tuning, Fin Rear Starboard, Failed	Tuning sequence has failed on fin. Triggers if fin movement is less than 50 degrees.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys.
45000.104.21	FIN Tuning, Fin Front Port, Failed	Tuning sequence has failed on fin. Triggers if fin movement is less than 50 degrees.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys.
45000.105.21	FIN Tuning, Fin Front Starboard, Failed	Tuning sequence has failed on fin. Triggers if fin movement is less than 50 degrees.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys.
45001.100.21	FIN Encoder, Fin Port, Failed	Encoder fault on fin.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys. Check if something is blocking the actuators Check if all the hydraulics mounted correctly to the actuators. Check if a PHC-3 fault is present.
45001.101.21	FIN Encoder, Fin Starboard, Failed	Encoder fault on fin.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys. Check if something is blocking the actuators Check if all the hydraulics mounted correctly to the actuators. Check if a PHC-3 fault is present.
45001.102.21	FIN Encoder, Fin Rear Port, Failed	Encoder fault on fin.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys. Check if something is blocking the actuators Check if all the hydraulics mounted correctly to the actuators. Check if a PHC-3 fault is present.
45001.103.21	FIN Encoder, Fin Rear Starboard, Failed	Encoder fault on fin.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys. Check if something is blocking the actuators Check if all the hydraulics mounted correctly to the actuators. Check if a PHC-3 fault is present.
45001.104.21	FIN Encoder, Fin Front Port, Failed	Encoder fault on fin.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys. Check if something is blocking the actuators Check if all the hydraulics mounted correctly to the actuators. Check if a PHC-3 fault is present.
45001.105.21	FIN Encoder, Fin Front Starboard, Failed	Encoder fault on fin.	Run bleeding to get rid of air in the hydraulic system Check encoder belt and pulleys. Check if something is blocking the actuators Check if all the hydraulics mounted correctly to the actuators. Check if a PHC-3 fault is present.
45001.100.22	FIN Encoder, Fin Port, Out of position	Encoder position on fin is outside the end stop position.	Run the detect end stop sequence. Check encoder belt and pulleys. Consult Sleipner dealer
45001.101.22	FIN Encoder, Fin Starboard, Out of position	Encoder position on fin is outside the end stop position.	Run the detect end stop sequence. Check encoder belt and pulleys. Consult Sleipner dealer
45001.102.22	FIN Encoder, Fin Rear Port, Out of position	Encoder position on fin is outside the end stop position.	Run the detect end stop sequence. Check encoder belt and pulleys. Consult Sleipner dealer
45001.103.22	FIN Encoder, Fin Rear Starboard, Out of position	Encoder position on fin is outside the end stop position.	Run the detect end stop sequence. Check encoder belt and pulleys. Consult Sleipner dealer

Fault Code	Description	Cause	Action
45001.104.22	FIN Encoder, Fin Front Port, Out of position	Encoder position on fin is outside the end stop position.	Run the detect end stop sequence. Check encoder belt and pulleys. Consult Sleipner dealer
45001.105.22	FIN Encoder, Fin Front Starboard, Out of position	Encoder position on fin is outside the end stop position.	Run the detect end stop sequence. Check encoder belt and pulleys. Consult Sleipner dealer
45001.100.24	FIN Encoder, Fin Port, Fault	Encoder failure on fin, unable to establish correct position.	Verify that encoder was installed correctly.
45001.101.24	FIN Encoder, Fin Starboard, Fault	Encoder failure on fin, unable to establish correct position.	Verify that encoder was installed correctly.
45001.102.24	FIN Encoder, Fin Rear Port, Fault	Encoder failure on fin, unable to establish correct position.	Verify that encoder was installed correctly.
45001.103.24	FIN Encoder, Fin Rear Starboard, Fault	Encoder failure on fin, unable to establish correct position.	Verify that encoder was installed correctly.
45001.104.24	FIN Encoder, Fin Front Port, Fault	Encoder failure on fin, unable to establish correct position.	Verify that encoder was installed correctly.
45001.105.24	FIN Encoder, Fin Front Starboard, Fault	Encoder failure on fin, unable to establish correct position.	Verify that encoder was installed correctly.
45001.100.209	FIN Encoder, Fin Port, MOTION FAULT	Encoder position does not change on Starboard (Front Starboard if 4-fin system) fin.	Check encoder belt, encoder cable or if the fin is locked in one position.
45001.101.209	FIN Encoder, Fin Starboard, MOTION FAULT	Encoder position does not change on Starboard (Front Starboard if 4-fin system) fin.	Check encoder belt, encoder cable or if the fin is locked in one position.
45001.102.209	FIN Encoder, Fin Rear Port, MOTION FAULT	Encoder position does not change on Starboard (Front Starboard if 4-fin system) fin.	Check encoder belt, encoder cable or if the fin is locked in one position.
45001.103.209	FIN Encoder, Fin Rear Starboard, MOTION FAULT	Encoder position does not change on Starboard (Front Starboard if 4-fin system) fin.	Check encoder belt, encoder cable or if the fin is locked in one position.
45001.104.209	FIN Encoder, Fin Front Port, MOTION FAULT	Encoder position does not change on Starboard (Front Starboard if 4-fin system) fin.	Check encoder belt, encoder cable or if the fin is locked in one position.
45001.105.209	FIN Encoder, Fin Front Starboard, MOTION FAULT	Encoder position does not change on Starboard (Front Starboard if 4-fin system) fin.	Check encoder belt, encoder cable or if the fin is locked in one position.
45003.100.200	FIN Communication, Fin Port, Timeout	Fin communication lost. Trigger if no fin is detected for 25 seconds at startup or after 1.5 seconds with no communication during normal operation. .	Check cabling between SCU and fin.
45003.101.200	FIN Communication, Fin Starboard, Timeout	Fin communication lost. Trigger if no fin is detected for 25 seconds at startup or after 1.5 seconds with no communication during normal operation. .	Check cabling between SCU and fin.
45003.102.200	FIN Communication, Fin Rear Port, Timeout	Fin communication lost. Trigger if no fin is detected for 25 seconds at startup or after 1.5 seconds with no communication during normal operation. .	Check cabling between SCU and fin.
45003.103.200	FIN Communication, Fin Rear Starboard, Timeout	Fin communication lost. Trigger if no fin is detected for 25 seconds at startup or after 1.5 seconds with no communication during normal operation. .	Check cabling between SCU and fin.
45003.104.200	FIN Communication, Fin Front Port, Timeout	Fin communication lost. Trigger if no fin is detected for 25 seconds at startup or after 1.5 seconds with no communication during normal operation. .	Check cabling between SCU and fin.
45003.105.200	FIN Communication, Fin Front Starboard, Timeout	Fin communication lost. Trigger if no fin is detected for 25 seconds at startup or after 1.5 seconds with no communication during normal operation. .	Check cabling between SCU and fin.
45004.100.200	FIN Position control, Fin Port, Timeout	SCU did not send a new position reference to the fin within the timeout window.	Look at secondary faults for cause.
45004.101.200	FIN Position control, Fin Starboard, Timeout	SCU did not send a new position reference to the fin within the timeout window.	Look at secondary faults for cause.
45004.102.200	FIN Position control, Fin Rear Port, Timeout	SCU did not send a new position reference to the fin within the timeout window.	Look at secondary faults for cause.
45004.103.200	FIN Position control, Fin Rear Starboard, Timeout	SCU did not send a new position reference to the fin within the timeout window.	Look at secondary faults for cause.
45004.104.200	FIN Position control, Fin Front Port, Timeout	SCU did not send a new position reference to the fin within the timeout window.	Look at secondary faults for cause.
45004.105.200	FIN Position control, Fin Front Starboard, Timeout	SCU did not send a new position reference to the fin within the timeout window.	Look at secondary faults for cause.
45006.100.13	FIN Proportional Valve 1, Fin Port, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45006.101.13	FIN Proportional Valve 1, Fin Starboard, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45006.102.13	FIN Proportional Valve 1, Fin Rear Port, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45006.103.13	FIN Proportional Valve 1, Fin Rear Starboard, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45006.104.13	FIN Proportional Valve 1, Fin Front Port, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45006.105.13	FIN Proportional Valve 1, Fin Front Starboard, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45006.100.51	FIN Proportional Valve 1, Fin Port, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45006.101.51	FIN Proportional Valve 1, Fin Starboard, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45006.102.51	FIN Proportional Valve 1, Fin Rear Port, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit

Fault Code	Description	Cause	Action
45006.103.51	FIN Proportional Valve 1, Fin Rear Starboard, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45006.104.51	FIN Proportional Valve 1, Fin Front Port, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45006.105.51	FIN Proportional Valve 1, Fin Front Starboard, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45007.100.13	FIN Proportional Valve 2, Fin Port, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45007.101.13	FIN Proportional Valve 2, Fin Starboard, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45007.102.13	FIN Proportional Valve 2, Fin Rear Port, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45007.103.13	FIN Proportional Valve 2, Fin Rear Starboard, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45007.104.13	FIN Proportional Valve 2, Fin Front Port, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45007.105.13	FIN Proportional Valve 2, Fin Front Starboard, Open Circuit	No current detected through the valve when the valve is turned on.	-Check for open circuit
45007.100.51	FIN Proportional Valve 2, Fin Port, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45007.101.51	FIN Proportional Valve 2, Fin Starboard, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45007.102.51	FIN Proportional Valve 2, Fin Rear Port, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45007.103.51	FIN Proportional Valve 2, Fin Rear Starboard, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45007.104.51	FIN Proportional Valve 2, Fin Front Port, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45007.105.51	FIN Proportional Valve 2, Fin Front Starboard, Current High	Current through valve is too high. Trigger at 3.75A	-check for short circuit
45010.100.200	FIN Centering normal, Fin Port, Timeout	Fin failed to normal-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45010.101.200	FIN Centering normal, Fin Starboard, Timeout	Fin failed to normal-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45010.102.200	FIN Centering normal, Fin Rear Port, Timeout	Fin failed to normal-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45010.103.200	FIN Centering normal, Fin Rear Starboard, Timeout	Fin failed to normal-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45010.104.200	FIN Centering normal, Fin Front Port, Timeout	Fin failed to normal-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45010.105.200	FIN Centering normal, Fin Front Starboard, Timeout	Fin failed to normal-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45011.100.200	FIN Centering fast, Fin Port, Timeout	Fin failed to fast-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45011.101.200	FIN Centering fast, Fin Starboard, Timeout	Fin failed to fast-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45011.102.200	FIN Centering fast, Fin Rear Port, Timeout	Fin failed to fast-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45011.103.200	FIN Centering fast, Fin Rear Starboard, Timeout	Fin failed to fast-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45011.104.200	FIN Centering fast, Fin Front Port, Timeout	Fin failed to fast-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45011.105.200	FIN Centering fast, Fin Front Starboard, Timeout	Fin failed to fast-center.	Check for hydraulic problems (if PHC-3 system). Verify encoder installed correctly.
45012.100.200	FIN FW upgrade, Fin Port, Timeout	SCU failed to upgrade the firmware on fin.	Check cabling between SCU and fin. Consult Sleipner dealer.
45012.101.200	FIN FW upgrade, Fin Starboard, Timeout	SCU failed to upgrade the firmware on fin.	Check cabling between SCU and fin. Consult Sleipner dealer.
45012.102.200	FIN FW upgrade, Fin Rear Port, Timeout	SCU failed to upgrade the firmware on fin.	Check cabling between SCU and fin. Consult Sleipner dealer.
45012.103.200	FIN FW upgrade, Fin Rear Starboard, Timeout	SCU failed to upgrade the firmware on fin.	Check cabling between SCU and fin. Consult Sleipner dealer.
45012.104.200	FIN FW upgrade, Fin Front Port, Timeout	SCU failed to upgrade the firmware on fin.	Check cabling between SCU and fin. Consult Sleipner dealer.
45012.105.200	FIN FW upgrade, Fin Front Starboard, Timeout	SCU failed to upgrade the firmware on fin.	Check cabling between SCU and fin. Consult Sleipner dealer.
45013.100.13	FIN Float valve, Fin Port, Open Circuit	No current detected through float valve on fin when the valve is turned on.	-Check for open circuit
45013.101.13	FIN Float valve, Fin Starboard, Open Circuit	No current detected through float valve on fin when the valve is turned on.	-Check for open circuit
45013.102.13	FIN Float valve, Fin Rear Port, Open Circuit	No current detected through float valve on fin when the valve is turned on.	-Check for open circuit

Fault Code	Description	Cause	Action
45013.103.13	FIN Float valve, Fin Rear Starboard, Open Circuit	No current detected through float valve on fin when the valve is turned on.	-Check for open circuit
45013.104.13	FIN Float valve, Fin Front Port, Open Circuit	No current detected through float valve on fin when the valve is turned on.	-Check for open circuit
45013.105.13	FIN Float valve, Fin Front Starboard, Open Circuit	No current detected through float valve on fin when the valve is turned on.	-Check for open circuit
45013.100.16	FIN Float valve, Fin Port, Short Circuit	Current through float valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45013.101.16	FIN Float valve, Fin Starboard, Short Circuit	Current through float valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45013.102.16	FIN Float valve, Fin Rear Port, Short Circuit	Current through float valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45013.103.16	FIN Float valve, Fin Rear Starboard, Short Circuit	Current through float valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45013.104.16	FIN Float valve, Fin Front Port, Short Circuit	Current through float valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45013.105.16	FIN Float valve, Fin Front Starboard, Short Circuit	Current through float valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45014.100.13	FIN Lock valve, Fin Port, Open Circuit	No current detected through lock valve on fin when the valve is turned on.	Check for open-circuit.
45014.101.13	FIN Lock valve, Fin Starboard, Open Circuit	No current detected through lock valve on fin when the valve is turned on.	Check for open-circuit.
45014.102.13	FIN Lock valve, Fin Rear Port, Open Circuit	No current detected through lock valve on fin when the valve is turned on.	Check for open-circuit.
45014.103.13	FIN Lock valve, Fin Rear Starboard, Open Circuit	No current detected through lock valve on fin when the valve is turned on.	Check for open-circuit.
45014.104.13	FIN Lock valve, Fin Front Port, Open Circuit	No current detected through lock valve on fin when the valve is turned on.	Check for open-circuit.
45014.105.13	FIN Lock valve, Fin Front Starboard, Open Circuit	No current detected through lock valve on fin when the valve is turned on.	Check for open-circuit.
45014.100.16	FIN Lock valve, Fin Port, Short Circuit	Current through lock valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45014.101.16	FIN Lock valve, Fin Starboard, Short Circuit	Current through lock valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45014.102.16	FIN Lock valve, Fin Rear Port, Short Circuit	Current through lock valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45014.103.16	FIN Lock valve, Fin Rear Starboard, Short Circuit	Current through lock valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45014.104.16	FIN Lock valve, Fin Front Port, Short Circuit	Current through lock valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45014.105.16	FIN Lock valve, Fin Front Starboard, Short Circuit	Current through lock valve is too high on fin. Trigger at 1.5A	Check for short-circuit.
45030.100.21	FIN Controller, Fin Port, Failed	Internal software error for fin.	- If problem persist, consult Sleipner dealer.
45030.101.21	FIN Controller, Fin Starboard, Failed	Internal software error for fin.	- If problem persist, consult Sleipner dealer.
45030.102.21	FIN Controller, Fin Rear Port, Failed	Internal software error for fin.	- If problem persist, consult Sleipner dealer.
45030.103.21	FIN Controller, Fin Rear Starboard, Failed	Internal software error for fin.	- If problem persist, consult Sleipner dealer.
45030.104.21	FIN Controller, Fin Front Port, Failed	Internal software error for fin.	- If problem persist, consult Sleipner dealer.
45030.105.21	FIN Controller, Fin Front Starboard, Failed	Internal software error for fin.	- If problem persist, consult Sleipner dealer.
45030.100.24	FIN Controller, Fin Port, Fault	Motor controller fault in fin.	- If problem persist, consult Sleipner dealer.
45030.101.24	FIN Controller, Fin Starboard, Fault	Motor controller fault in fin.	- If problem persist, consult Sleipner dealer.
45030.102.24	FIN Controller, Fin Rear Port, Fault	Motor controller fault in fin.	- If problem persist, consult Sleipner dealer.
45030.103.24	FIN Controller, Fin Rear Starboard, Fault	Motor controller fault in fin.	- If problem persist, consult Sleipner dealer.
45030.104.24	FIN Controller, Fin Front Port, Fault	Motor controller fault in fin.	- If problem persist, consult Sleipner dealer.
45030.105.24	FIN Controller, Fin Front Starboard, Fault	Motor controller fault in fin.	- If problem persist, consult Sleipner dealer.
45030.100.100	FIN Controller, Fin Port, No Communication	Fin lost communication with stabilizing controller.	Verify the canbus bus between the SCU and fin controller is properly terminated and is properly connected.
45030.101.100	FIN Controller, Fin Starboard, No Communication	Fin lost communication with stabilizing controller.	Verify the canbus bus between the SCU and fin controller is properly terminated and is properly connected.
45030.102.100	FIN Controller, Fin Rear Port, No Communication	Fin lost communication with stabilizing controller.	Verify the canbus bus between the SCU and fin controller is properly terminated and is properly connected.
45030.103.100	FIN Controller, Fin Rear Starboard, No Communication	Fin lost communication with stabilizing controller.	Verify the canbus bus between the SCU and fin controller is properly terminated and is properly connected.
45030.104.100	FIN Controller, Fin Front Port, No Communication	Fin lost communication with stabilizing controller.	Verify the canbus bus between the SCU and fin controller is properly terminated and is properly connected.
45030.105.100	FIN Controller, Fin Front Starboard, No Communication	Fin lost communication with stabilizing controller.	Verify the canbus bus between the SCU and fin controller is properly terminated and is properly connected.
45030.100.103	FIN Controller, Fin Port, Following Error	Fin controller failed to meet position requirements sent by the stabilizing controller, likely due to mechanical resistance.	Verify it happens under less mechanical resistance. If problem persist, consult Sleipner dealer.
45030.101.103	FIN Controller, Fin Starboard, Following Error	Fin controller failed to meet position requirements sent by the stabilizing controller, likely due to mechanical resistance.	Verify it happens under less mechanical resistance. If problem persist, consult Sleipner dealer.
45030.102.103	FIN Controller, Fin Rear Port, Following Error	Fin controller failed to meet position requirements sent by the stabilizing controller, likely due to mechanical resistance.	Verify it happens under less mechanical resistance. If problem persist, consult Sleipner dealer.

Fault Code	Description	Cause	Action
45030.103.103	FIN Controller, Fin Rear Starboard, Following Error	Fin controller failed to meet position requirements sent by the stabilizing controller, likely due to mechanical resistance.	Verify it happens under less mechanical resistance. If problem persist, consult Sleipner dealer.
45030.104.103	FIN Controller, Fin Front Port, Following Error	Fin controller failed to meet position requirements sent by the stabilizing controller, likely due to mechanical resistance.	Verify it happens under less mechanical resistance. If problem persist, consult Sleipner dealer.
45030.105.103	FIN Controller, Fin Front Starboard, Following Error	Fin controller failed to meet position requirements sent by the stabilizing controller, likely due to mechanical resistance.	Verify it happens under less mechanical resistance. If problem persist, consult Sleipner dealer.
45030.100.201	FIN Controller, Fin Port, INIT FAIL	Fin controller failed during init.	Consult Sleipner dealer.
45030.101.201	FIN Controller, Fin Starboard, INIT FAIL	Fin controller failed during init.	Consult Sleipner dealer.
45030.102.201	FIN Controller, Fin Rear Port, INIT FAIL	Fin controller failed during init.	Consult Sleipner dealer.
45030.103.201	FIN Controller, Fin Rear Starboard, INIT FAIL	Fin controller failed during init.	Consult Sleipner dealer.
45030.104.201	FIN Controller, Fin Front Port, INIT FAIL	Fin controller failed during init.	Consult Sleipner dealer.
45030.105.201	FIN Controller, Fin Front Starboard, INIT FAIL	Fin controller failed during init.	Consult Sleipner dealer.
45030.100.209	FIN Controller, Fin Port, MOTION FAULT	Fin fails to stop movement.	Check cabling and encoder installation.
45030.101.209	FIN Controller, Fin Starboard, MOTION FAULT	Fin fails to stop movement.	Check cabling and encoder installation.
45030.102.209	FIN Controller, Fin Rear Port, MOTION FAULT	Fin fails to stop movement.	Check cabling and encoder installation.
45030.103.209	FIN Controller, Fin Rear Starboard, MOTION FAULT	Fin fails to stop movement.	Check cabling and encoder installation.
45030.104.209	FIN Controller, Fin Front Port, MOTION FAULT	Fin fails to stop movement.	Check cabling and encoder installation.
45030.105.209	FIN Controller, Fin Front Starboard, MOTION FAULT	Fin fails to stop movement.	Check cabling and encoder installation.
45031.100.16	FIN Motor, Fin Port, Short Circuit	Motor short circuit (overcurrent) on fin.	Consult Sleipner dealer.
45031.101.16	FIN Motor, Fin Starboard, Short Circuit	Motor short circuit (overcurrent) on fin.	Consult Sleipner dealer.
45031.102.16	FIN Motor, Fin Rear Port, Short Circuit	Motor short circuit (overcurrent) on fin.	Consult Sleipner dealer.
45031.103.16	FIN Motor, Fin Rear Starboard, Short Circuit	Motor short circuit (overcurrent) on fin.	Consult Sleipner dealer.
45031.104.16	FIN Motor, Fin Front Port, Short Circuit	Motor short circuit (overcurrent) on fin.	Consult Sleipner dealer.
45031.105.16	FIN Motor, Fin Front Starboard, Short Circuit	Motor short circuit (overcurrent) on fin.	Consult Sleipner dealer.
45032.100.209	FIN Set Keel, Fin Port, MOTION FAULT	Tried to set home while fin was moving.	Try again, if it keeps failing, remove load from fin (like water currents).
45032.101.209	FIN Set Keel, Fin Starboard, MOTION FAULT	Tried to set home while fin was moving.	Try again, if it keeps failing, remove load from fin (like water currents).
45032.102.209	FIN Set Keel, Fin Rear Port, MOTION FAULT	Tried to set home while fin was moving.	Try again, if it keeps failing, remove load from fin (like water currents).
45032.103.209	FIN Set Keel, Fin Rear Starboard, MOTION FAULT	Tried to set home while fin was moving.	Try again, if it keeps failing, remove load from fin (like water currents).
45032.104.209	FIN Set Keel, Fin Front Port, MOTION FAULT	Tried to set home while fin was moving.	Try again, if it keeps failing, remove load from fin (like water currents).
45032.105.209	FIN Set Keel, Fin Front Starboard, MOTION FAULT	Tried to set home while fin was moving.	Try again, if it keeps failing, remove load from fin (like water currents).

Fault Code	Description	Cause	Action
106.1.0	Emergency Stop, Instance 1, -	Drive in Emergency STOP. Safety circuit signal(s) connected to connector STO or Emergency stop digital input is open.	-Check Emergency stop button. -Check safety circuit connections to STO connector on the drive. -Check Emergency stop digital input connection on the drive.
10600.0.208	Retract Controller, -, INTERLOCK	Retract Interlock	-Check if retract is deployed. -No communication with Retract Controller, check if Retract Controller has power. -Check PDC-301 and Retract Controller setup.
36100.1.24	VFD, Instance 1, Fault	VFD faulted	-See VFD for more information
36100.1.100	VFD, Instance 1, No Communication	PDC-301 has no MODBUS communication with VFD.	-Check communication cable with VFD -Check if VFD has power
36101.1.200	VFD PMS, Instance 1, Timeout	VFD is not ready within 60 after power request.	-Check if VFD has power
36101.1.204	VFD PMS, Instance 1, SIGNAL LOST	Lost Power Management signal from VFD, VFD not available anymore.	-Check VFD for more information.
36103.1.0	VFD IN LOCAL, Instance 1, -	VFD in Local or Hand Mode	-Change mode in VFD panel.

Fault Code	Description	Cause	Action
10000.0.11	Motor Temp, -, Level High	Motor temperature is higher than 120C/248F	- Motor must cool down to below 110C/230F
10000.0.13	Motor Temp, -, Open Circuit	Motor temperature sensor open circuit	-Check for open circuit on the temperature sensor on the motor
10000.0.16	Motor Temp, -, Short Circuit	Motor temperature sensor short circuit	-Check for short circuit on the temperature sensor on the motor
10001.0.13	Motor Thermo Switch, -, Open Circuit	Thermoswitch input is activated	-Motor needs to cool down before operated again -If motor is not warm then check for thermoswitch open circuit or wrong setup
10100.0.11	Device Cooling Fin Temp, -, Level High	PPC controller temperature is higher than 80C/176F	-PPC must cool down to below 45C/113F
10200.0.10	System Voltage, -, Level Low	Low motor voltage when motor is running. 12V thruster below 8.0V 24V thruster below 12.0V	-Reset or power OFF, wait 30sec and power ON the PPC -Recharge thruster battery
20000.0.73	IPC, -, Contact Before Energized	IPC error, motor relay fault before energized	-Turn off thruster battery main switch. -Thruster must be serviced by authorized personnel
20000.200.70	IPC, Starboard, No Contact Energized	IPC error, motor relay no contact when energized to starboard side	-Turn off thruster battery main switch. -Thruster must be serviced by authorized personnel -If motor running up to 60% then check if A2 white wire is connected
20000.201.70	IPC, Port, No Contact Energized	IPC error, motor relay no contact when energized to port side	-Turn off thruster battery main switch. -Thruster must be serviced by authorized personnel -If motor running up to 60% then check if A2 white wire is connected
30000.200.51	Thruster Solenoid, Starboard, Current High	Motor starboard contactor fault	-Check motor contactor connections -Check for short circuit -Check for dead relay
30000.201.51	Thruster Solenoid, Port, Current High	Motor port contactor fault	-Check motor contactor connections -Check for short circuit -Check for dead relay
30100.0.51	Thruster Motor Current, -, Current High	Motor current too high	-Reset or power OFF, wait 30sec and power ON the PPC -Check for marine growth on propeller and tunnel -Check obstacles in the thruster tunnel -If not resolved, thruster must be serviced by authorized personnel
30100.0.52	Thruster Motor Current, -, Current Critical	Motor current critical high	-Reset or power OFF, wait 30sec and power ON the PPC -If not resolved, thruster must be serviced by authorized personnel
30300.0.19	Cooling Fan Speed, -, Under Limit	Cooling fan stopped or running to slow	PPC must be serviced by authorized personnel

Fault Code	Description	Cause	Action
100.0.0	System Error, -, -	Internal error	-Consult Sleipner dealer.
107.0.24	Bootloader fault code, -, Fault	Bootloader failed upgrading.	-Check S-link cables and T-connectors. -If problem persist, consult Sleipner dealer.
155.0.24	Internal Voltage, -, Fault	Internal error	-If problem persist, consult Sleipner dealer.
10000.106.55	Motor Temp, -, Overtemp	Stator over temperature	-Wait for motor to cool down
10002.0.13	Stator Temperature, -, Open Circuit	Stator temperature sensor not connected	-If problem persist, consult Sleipner dealer.
10002.0.16	Stator Temperature, -, Short Circuit	Stator temperature sensor short circuit	-If problem persist, consult Sleipner dealer.
10003.0.13	Transistor Temperature, -, Open Circuit	Transistor temperature sensor not connected	-If problem persist, consult Sleipner dealer.
10003.0.16	Transistor Temperature, -, Short Circuit	Transistor temperature sensor short circuit	-If problem persist, consult Sleipner dealer.
10101.106.55	Device CPU Temp, -, Overtemp	Main MCU temperature above max limit	-Wait for motor to cool down
10101.107.55	Device CPU Temp, -, Overtemp	Motor MCU temperature above max limit	-Wait for motor to cool down.
10102.106.55	Device Board Temperature, -, Overtemp	Transistor over temperature	-Wait for motor to cool down
10104.106.24	Motor Speed, -, Fault	Motor speed outside valid range.	-Check propeller blades and flexible coupling.
10104.107.212	Motor Speed, -, Overspeed	Motor speed outside valid range	-Check propeller blades and flexible coupling. -If not resolved consult Sleipner representative.
10200.106.53	System Voltage, -, Overvoltage	Main MCU temperature above max limit	-Measure voltage at battery terminals and thruster terminals.
10200.106.54	System Voltage, -, Undervoltage	Motor supply voltage below min limit	-Measure voltage at battery terminals and thruster terminals.
10200.107.53	System Voltage, -, Overvoltage	Motor supply voltage above max limit	-Measure voltage at battery terminals and thruster terminals.
10200.107.54	System Voltage, -, Undervoltage	Motor supply voltage below min limit	-Measure voltage at battery terminals and thruster terminals.
10301.0.19	Motor Position, -, Under Limit	Encoder magnitude under limit	-If problem persist, consult Sleipner dealer.
10301.0.20	Motor Position, -, Over Limit	Encoder magnitude over limit	-If problem persist, consult Sleipner dealer.
10301.0.100	Motor Position, -, No Communication	Communication with speed sensor failed	-If problem persist, consult Sleipner dealer.
10301.107.212	Motor Position, -, Overspeed	Motor fails to stop correctly	-If problem persist, consult Sleipner dealer.
10302.107.24	uC Communication, -, Fault	Communication between internal MCUs failed	-If problem persist, consult Sleipner dealer.
10302.107.100	uC Communication, -, No Communication	Communication between internal MCUs timeout	-If problem persist, consult Sleipner dealer.
10303.107.20	Motor Torque, -, Over Limit	Motor torque above max limit	-Check if propeller is obstructed. -If not resolved consult Sleipner dealer.
10600.0.24	Retract Controller, -, Fault	Fault detected on retract	-Check retract faults
10600.0.208	Retract Controller, -, INTERLOCK	Function or Location configuration does not match retract controller configuration	-Check configuration of installed devices.
30100.0.13	Thruster Motor Current, -, Open Circuit	Motor phase not connected.	-If problem persist, consult Sleipner dealer.
30100.0.203	Thruster Motor Current, -, Not Calibrated	-Internal current measurement is not correct before startup.	-If problem persist, consult Sleipner dealer.
30100.107.57	Thruster Motor Current, -, Overcurrent	Measured motor phase current above max limit	-Check if propeller is blocked. -If not resolved consult Sleipner dealer.
60000.0.13	Main Fan, -, Open Circuit	Cooling fan temperature measurement open circuit	-If problem persist, consult Sleipner dealer.
60000.0.16	Main Fan, -, Short Circuit	Cooling fan temperature measurement short circuit	-If problem persist, consult Sleipner dealer.
60000.0.50	Main Fan, -, Current Low	Cooling fan current consumption below min limit	-If problem persist, consult Sleipner dealer.
60000.0.51	Main Fan, -, Current High	Cooling fan current consumption above max limit	-If problem persist, consult Sleipner dealer.
60000.0.53	Main Fan, -, Overvoltage	Cooling fan supply voltage above max limit	-If problem persist, consult Sleipner dealer.
60000.0.54	Main Fan, -, Undervoltage	Cooling fan supply voltage below min limit	-If problem persist, consult Sleipner dealer.
60000.0.55	Main Fan, -, Overtemp	Cooling fan power supply temperature above max limit	-Wait for motor to cool down
60000.0.211	Main Fan, -, Underspeed	Cooling fan speed below limit	-If problem persist, consult Sleipner dealer.
60000.0.212	Main Fan, -, Overspeed	Cooling fan speed above limit	-If problem persist, consult Sleipner dealer.

TP-35 Fault Codes

MC_0665

Fault Code	Fault Name	Fault Description	Action
151.0.54	S-Link Power, -, Undervoltage	S-Link supply voltage below 9.0V or missing	Check S-Link power
152.0.54	AUX Power, -, Undervoltage	AUX supply voltage below 9.0V or missing	Check AUX power

VDMI-1 Fault Codes

MC_0449

Fault Code	Fault Name	Fault Description	Action
109.0.0	Configuration Error - -	<ul style="list-style-type: none">-No Speed Source configured. At least one instance must be configured for VDMI to log data.-Instance configured to receive data from PDC-301, but receive data from TMU-1 or vice versa.-An instance receives data when no Speed Source is configured, or vice versa.	Check configuration and installed devices on S-Link bus.

Fault Code	Fault Name	Fault Description	Action
100.0.0	System Error, -, -	System Error	Consult Slepner dealer.
106.0.24	Emergency Stop, -, Fault	PCUC Emergency Stop Triggered	Reset emergency stop button.
106.0.151	Emergency Stop, -, Self-Test Fault	PCUC Emergency Stop Selftest Fail	Contact Slepner dealer. Verify no shorts on the emergency stop circuit.
154.0.53	BUS Voltage, -, Overvoltage	48V / Battery Overvoltage	Check battery voltage. Cycle 24V.
154.0.54	BUS Voltage, -, Undervoltage	48V / Battery Undervoltage	- Check battery voltage and cabling from batteries. - Check incoming battery Fuses (3 separate fuses) in the PCU cabinet
155.0.53	Internal Voltage, -, Overvoltage	PCUC has internal power supply (5V) Overvoltage.	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
155.0.54	Internal Voltage, -, Undervoltage	PCUC has internal power supply (5V) Undervoltage. - Likely broken PCB component if only this fault occurs. - Can also be a loose/faulty connection between the PCUC and PCUM	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
155.0.151	Internal Voltage, -, Self-Test Fault	PCUC 5V self-test timed out at startup. - Caused by 5V undervoltage at startup	Contact Slepner dealer.
10101.0.55	Device CPU Temp, -, Overtemp	PCUC Critical circuit board temperature - PCUC Circuit Board temperature sensor indicates high temperature which makes the system shut down to avoid damage or incorrect functional behaviour	Check that ships engine room temperature is within normal limits (<55 degrees C) - If problem persists, contact Slepner dealer to discuss adding a PCU cabinet fan or similar.
10101.0.56	Device CPU Temp, -, Warningtemp	PCUC Overtemperature - PCUC Circuit Board temperature sensor indicates high temperature which may, if the temperature continues to rise, make the system shut down to avoid damage or incorrect functional behaviour	Check that ships engine room temperature is within normal limits (<55 degrees C) - If problem persists, contact Slepner dealer to discuss adding a PCU cabinet fan or similar.
10210.0.53	Operating Voltage, -, Overvoltage	Overvoltage on the 24V circuit.	Check 24V power supply.
10210.0.54	Operating Voltage, -, Undervoltage	Undervoltage on the 24V circuit.	Check 24V power supply
21000.0.101	PCUM, -, Bus Off	No activity detected on the PCUM serial-bus.	Check cabling for serial-bus. Verify 24V going to PCUM modules.
21000.0.150	PCUM, -, ID Fault	Unknown PCUM RS485 bus-address. - Dipswitch likely set to wrong address.	Verify dipswitch addresses on the PCUM modules are correct.
21000.1.53	PCUM, Instance 1, Overvoltage	PCUM 1 has internal power supply (5V) Overvoltage. - Likely broken PCB component if only this fault occurs. - Can also be a loose/faulty connection between the PCUC and PCUM	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
21000.1.54	PCUM, Instance 1, Undervoltage	PCUM 1 has internal power supply (5V) undervoltage. - Likely broken PCB component if only this fault occurs. - Can also be a loose/faulty connection between the PCUC and PCUM	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
21000.1.55	PCUM, Instance 1, Overtemp	PCUM 1 circuit board critical temperature - PCUM 1 Circuit Board temperature sensor indicates high temperature which shuts off the channel and thus opening the Channel 1 Contactor to avoid damage or incorrect functional behaviour.	Check that ships engine room temperature is within normal limits (<55 degrees C) - If problem persists, contact Slepner dealer to discuss adding a PCU cabinet fan or similar.
21000.1.100	PCUM, Instance 1, No Communication	No communication with PCUM 1. - Can be an incorrect address setting - Can also be a loose/faulty connection between the PCUC and PCUM 1	Contact a Slepner dealer. - Verify dipswitch addresses set to correct value - Check internal wiring & connectors between PCUC and PCUM
21000.2.53	PCUM, Instance 2, Overvoltage	PCUM 2 has internal power supply (5V) Overvoltage. - Likely broken PCB component if only this fault occurs. - Can also be a loose/faulty connection between the PCUC and PCUM	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
21000.2.54	PCUM, Instance 2, Undervoltage	PCUM 2 has internal power supply (5V) undervoltage. - Likely broken PCB component if only this fault occurs. - Can also be a loose/faulty connection between the PCUC and PCUM	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
21000.2.55	PCUM, Instance 2, Overtemp	PCUM 2 circuit board critical temperature - PCUM 2 Circuit Board temperature sensor indicates high temperature which shuts off the channel and thus opening the Channel 2 Contactor to avoid damage or incorrect functional behaviour.	Check that ships engine room temperature is within normal limits (<55 degrees C) - If problem persists, contact Slepner dealer to discuss adding a PCU cabinet fan or similar.
21000.2.100	PCUM, Instance 2, No Communication	No communication with PCUM 2. - Can be an incorrect address setting - Can also be a loose/faulty connection between the PCUC and PCUM 2	Contact a Slepner dealer. - Verify dipswitch addresses set to correct value - Check internal wiring & connectors between PCUC and PCUM
21000.3.53	PCUM, Instance 3, Overvoltage	PCUM 3 has internal power supply (5V) Overvoltage. - Likely broken PCB component if only this fault occurs. - Can also be a loose/faulty connection between the PCUC and PCUM	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
21000.3.54	PCUM, Instance 3, Undervoltage	PCUM 3 has internal power supply (5V) undervoltage. - Likely broken PCB component if only this fault occurs. - Can also be a loose/faulty connection between the PCUC and PCUM	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
21000.3.55	PCUM, Instance 3, Overtemp	PCUM 3 circuit board critical temperature - PCUM 3 Circuit Board temperature sensor indicates high temperature which shuts off the channel and thus opening the Channel 3 Contactor to avoid damage or incorrect functional behaviour.	Check that ships engine room temperature is within normal limits (<55 degrees C) - If problem persists, contact Slepner dealer to discuss adding a PCU cabinet fan or similar.
21000.3.100	PCUM, Instance 3, No Communication	No communication with PCUM 3. - Can be an incorrect address setting - Can also be a loose/faulty connection between the PCUC and PCUM 3	Contact a Slepner dealer. - Verify dipswitch addresses set to correct value - Check internal wiring & connectors between PCUC and PCUM

Fault Code	Fault Name	Fault Description	Action
21000.4.53	PCUM, Instance 4, Overvoltage	PCUM 4 has internal power supply (5V) Overvoltage. - Likely broken PCB component if only this fault occurs. - Can also be a loose/faulty connection between the PCUC and PCUM	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
21000.4.54	PCUM, Instance 4, Undervoltage	PCUM 4 has internal power supply (5V) undervoltage. - Likely broken PCB component if only this fault occurs. - Can also be a loose/faulty connection between the PCUC and PCUM	Contact a Slepner dealer if the fault does not go away despite clearing several times. - Check if 24V power-supply is nominal - Check internal wiring between PCUC and PCUM
21000.4.55	PCUM, Instance 4, Overtemp	PCUM 4 circuit board critical temperature - PCUM 4 Circuit Board temperature sensor indicates high temperature which shuts off the channel and thus opening the Channel 4 Contactor to avoid damage or incorrect functional behaviour.	Check that ships engine room temperature is within normal limits (<55 degrees C) - If problem persists, contact Slepner dealer to discuss adding a PCU cabinet fan or similar.
21000.4.100	PCUM, Instance 4, No Communication	No communication with PCUM 4. - Can be an incorrect address setting - Can also be a loose/faulty connection between the PCUC and PCUM 4	Contact a Slepner dealer. - Verify dipswitch addresses set to correct value - Check internal wiring & connectors between PCUC and PCUM
21001.1.13	PCUM Contactor, Instance 1, Open Circuit	Contactor Coil on PCUM 1 open circuit. - Current through contactor coil is detected to be below threshold	- Check 24V supply to system - Check cable/connector between PCUM and the Contactor - Check internal wiring between PCUC and PCUM
21001.1.51	PCUM Contactor, Instance 1, Current High	Contactor Coil on PCUM 1 Overcurrent - Overcurrent (>2.0A) measured on contactor coil	Verify contactor not defective/shorted.
21001.1.57	PCUM Contactor, Instance 1, Overcurrent	Contactor Coil on PCUM 1 Short Circuit. - Overcurrent protection triggered	Verify contactor not defective/shorted.
21001.1.100	PCUM Contactor, Instance 1, No Communication	PCUM 1 lost communication with PCUC - The internal RS485 bus between the PCUM and the PCUC has timeout	Check internal wiring between PCUC and PCUM
21001.2.13	PCUM Contactor, Instance 2, Open Circuit	Contactor Coil on PCUM 2 open circuit. - Current through contactor coil is detected to be below threshold	- Check 24V supply to system - Check cable/connector between PCUM and the Contactor - Check internal wiring between PCUC and PCUM
21001.2.51	PCUM Contactor, Instance 2, Current High	Contactor Coil on PCUM 2 Overcurrent - Overcurrent (>2.0A) measured on contactor coil	Verify contactor not defective/shorted.
21001.2.57	PCUM Contactor, Instance 2, Overcurrent	Contactor Coil on PCUM 2 Short Circuit. - Overcurrent protection triggered	Verify contactor not defective/shorted.
21001.2.100	PCUM Contactor, Instance 2, No Communication	PCUM 2 lost communication with PCUC - The internal RS485 bus between the PCUM and the PCUC has timeout	Check internal wiring between PCUC and PCUM
21001.3.13	PCUM Contactor, Instance 3, Open Circuit	Contactor Coil on PCUM 3 open circuit. - Current through contactor coil is detected to be below threshold	- Check 24V supply to system - Check cable/connector between PCUM and the Contactor - Check internal wiring between PCUC and PCUM
21001.3.51	PCUM Contactor, Instance 3, Current High	Contactor Coil on PCUM 3 Overcurrent - Overcurrent (>2.0A) measured on contactor coil	Verify contactor not defective/shorted.
21001.3.57	PCUM Contactor, Instance 3, Overcurrent	Contactor Coil on PCUM 3 Short Circuit. - Overcurrent protection triggered	Verify contactor not defective/shorted.
21001.3.100	PCUM Contactor, Instance 3, No Communication	PCUM 3 lost communication with PCUC - The internal RS485 bus between the PCUM and the PCUC has timeout	Check internal wiring between PCUC and PCUM
21001.4.13	PCUM Contactor, Instance 4, Open Circuit	Contactor Coil on PCUM 4 open circuit. - Current through contactor coil is detected to be below threshold	- Check 24V supply to system - Check cable/connector between PCUM and the Contactor - Check internal wiring between PCUC and PCUM
21001.4.51	PCUM Contactor, Instance 4, Current High	Contactor Coil on PCUM 1 Overcurrent - Overcurrent (>2.0A) measured on contactor coil	Verify contactor not defective/shorted.
21001.4.57	PCUM Contactor, Instance 4, Overcurrent	Contactor Coil on PCUM 4 Short Circuit. - Overcurrent protection triggered	Verify contactor not defective/shorted.
21001.4.100	PCUM Contactor, Instance 4, No Communication	PCUM 4 lost communication with PCUC - The internal RS485 bus between the PCUM and the PCUC has timeout	Check internal wiring between PCUC and PCUM
21003.1.54	PCUM Contactor Coil Voltage, Instance 1, Undervoltage	PCUM 1 24V supply has too low voltage to close contactor. -Contactors will not close if voltage is <17V	- Check if power-supply to system is nominal - Check internal wiring between PCUC and PCUM
21003.2.54	PCUM Contactor Coil Voltage, Instance 2, Undervoltage	PCUM 2 24V supply has too low voltage to close contactor. -Contactors will not close if voltage is <17V	- Check if power-supply to system is nominal - Check internal wiring between PCUC and PCUM
21003.3.54	PCUM Contactor Coil Voltage, Instance 3, Undervoltage	PCUM 3 24V supply has too low voltage to close contactor. -Contactors will not close if voltage is <17V	- Check if power-supply to system is nominal - Check internal wiring between PCUC and PCUM
21003.4.54	PCUM Contactor Coil Voltage, Instance 4, Undervoltage	PCUM 4 24V supply has too low voltage to close contactor. -Contactors will not close if voltage is <17V	- Check if power-supply to system is nominal - Check internal wiring between PCUC and PCUM
21100.0.53	PTO Inverter, -, Overvoltage	PTO Inverter Port KSI Undervoltage	- Cycle 24V supply (power knob on the outside of the PCU cabinet) - Verify that the 24V supply is nominal - Check cable and connectors between PCU and PTO Inverter for damages or loose connections
21100.200.51	PTO Inverter, Starboard, Current High	PTO Inverter Starboard KSI Overcurrent - PCUC measures >2.2 A on the KSI wire from the PCUC to the PTO Inverter	- Verify harness between PCUC and PTO Starboard Generator/Inverter to ensure that no cable/wire has short circuit.
21100.200.52	PTO Inverter, Starboard, Current Critical	PTO Inverter STB critical current.	- Verify harness between PCUC and PTO Starboard Generator/Inverter to ensure that no cable/wire has short circuit.
21100.201.51	PTO Inverter, Port, Current High	PTO Inverter Port KSI Overcurrent - PCUC measures >2.2 A on the KSI wire from the PCUC to the PTO Inverter	- Verify harness between PCUC and PTO Port Generator/Inverter to ensure that no cable/wire has short circuit.
21100.201.52	PTO Inverter, Port, Current Critical	PTO Port KSI critical current.	- Verify harness between PCUC and PTO Port Generator/Inverter to ensure that no cable/wire has short circuit.

Fault Code	Fault Name	Fault Description	Action
21101.0.53	PCU Key Switch Input Inverter Starboard, -, Overvoltage	PTO Inverter STB KSI Undervoltage	<ul style="list-style-type: none"> - Cycle 24V supply (power knob on the outside of the PCU cabinet) - Verify that the 24V supply is nominal - Check cable and connectors between PCU and PTO Inverter for damages or loose connections
21102.0.51	PCU Seawater Pump Relay, -, Current High	Current to relay coil for seawater pump higher than 2.2A for more than 100ms.	<ul style="list-style-type: none"> - Verify cables to ensure no short circuits are present - Exchange the relay
21102.0.52	PCU Seawater Pump Relay, -, Current Critical	Current to relay coil for seawater pump reached critical current limit.	<ul style="list-style-type: none"> - Verify cables to ensure no short circuits are present - Exchange the relay
21103.0.100	PCU Battery System Interface, -, No Communication	No response from Modbus RTU/Phoenix Contact IO module.	<ul style="list-style-type: none"> - Verify cabling and connectors between the RTU/Phoenix Contact IO module and the PCUC - Verify that the RTU/Phoenix Contact Modbus IO module has correct 24V supply (LEDs shall be lit) - Make sure the Modbus IO module is parameterized according to spec.
21103.0.204	PCU Battery System Interface, -, SIGNAL LOST	No valid signal available from the 48V Batteries to the RTU/Phoenix Contact Modbus IO module.	<ul style="list-style-type: none"> - Verify that 48V batteries have no faults - Check low voltage signal cables between the 48V batteries and the RTU/Phoenix Contact IO module.
21104.0.10	PCU Coolant Level, -, Level Low	Coolant level low.	<ul style="list-style-type: none"> - Check the coolant level - Check harness & Connectors between Coolant Level sensor and the PCUC
21105.0.150	PTO Inverter, -, ID Fault	Unknown ID on Inverter Possible causes: - Incorrect CAN configuration of inverter	Contact a Sleipner dealer if the fault does not go away.
21105.200.52	PTO Inverter, Starboard, Current Critical	PTO STB Phase currents too high.	Contact Sleipner dealer
21105.200.56	PTO Inverter, Starboard, Warningtemp	Starboard PTO inverter is too hot and performing a cutback on current generated.	Check coolant level, verify that the cooling pumps are working.
21105.200.100	PTO Inverter, Starboard, No Communication	PTO Inverter Starboard No Communication Possible causes: - Cabling error - Inverter/PCU damaged - Inverter not properly configured	<ul style="list-style-type: none"> - Check cabling and connectors between PCU and PTO Inverter - Cycle 24V Supply (power knob on the outside of the PCU cabinet)
21105.201.52	PTO Inverter, Port, Current Critical	PTO Port Phase currents too high.	Contact Sleipner dealer
21105.201.56	PTO Inverter, Port, Warningtemp	Port PTO inverter is too hot and performing a cutback on current generated.	Check coolant level, verify that the cooling pumps are working.
21105.201.100	PTO Inverter, Port, No Communication	PTO Inverter Port No Communication Possible causes: - Cabling error - Inverter/PCU damaged - Inverter not properly configured	<ul style="list-style-type: none"> - Check cabling and connectors between PCU and PTO Inverter - Cycle 24V Supply (power knob on the outside of the PCU cabinet)
21106.200.24	PTO Inverter Status Register 1, Starboard, Fault	PTO Starboard Inverter Fault in Status-Register 1 Possible causes: - Internal EEPROM error	Contact a Sleipner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V (power knob on the outside of the PCU cabinet) to reset inverter software
21106.201.24	PTO Inverter Status Register 1, Port, Fault	PTO Port Inverter Fault in Status-Register 1 Possible causes: - Internal EEPROM error	Contact a Sleipner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V (power knob on the outside of the PCU cabinet) to reset inverter software
21107.200.24	PTO Inverter Status Register 2, Starboard, Fault	PTO Starboard Inverter Fault in Status-Register 2 Possible causes: - Severe 48V Battery Undervoltage - PTO Generator rotational sensor (Cos/Sin Sensor) Fault - Severe Controller undertemperature	Contact a Sleipner dealer if the fault does not go away despite clearing several times. Possible fixes: - Verify batteries provide sufficient voltage and 48V cable connection is intact. - Verify that the PTO Generator rotational sensor is connected/intact. - Verify that the ambient temperature in the motor-room is sufficiently high.
21107.201.24	PTO Inverter Status Register 2, Port, Fault	PTO Port Inverter Fault in Status-Register 2 Possible causes: - Severe 48V Battery Undervoltage - PTO Generator rotational sensor (Cos/Sin Sensor) Fault - Severe Controller undertemperature	Contact a Sleipner dealer if the fault does not go away despite clearing several times. Possible fixes: - Verify batteries provide sufficient voltage and 48V cable connection is intact. - Verify that the PTO Generator rotational sensor is connected/intact. - Verify that the ambient temperature in the Engine room is sufficiently high.
21108.200.24	PTO Inverter Status Register 3, Starboard, Fault	PTO Starboard Inverter Fault in Status-Register 3 Possible causes: - Controller Severe Overtemperature	Contact a Sleipner dealer if the fault does not go away despite clearing several times. Possible fixes: - Ensure that the coolant loop is intact and that the coolant flow is not interrupted - Ensure that the coolant pumps are operational
21108.201.24	PTO Inverter Status Register 3, Port, Fault	PTO Port Inverter Fault in Status-Register 3 Possible causes: - Controller Severe Overtemperature	Contact a Sleipner dealer if the fault does not go away despite clearing several times. Possible fixes: - Ensure that the coolant loop is intact and that the coolant flow is not interrupted - Ensure that the coolant pumps are operational
21109.200.24	PTO Inverter Status Register 4, Starboard, Fault	PTO Starboard Inverter Fault in Status-Register 4 Possible causes: - Controller Overcurrent - Current Sensor Fault - Parameter Change Fault - Motor Open fault	Contact a Sleipner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V power (power knob on the outside of the PCU cabinet). - Cabling from the PTO inverter to the PTO generator might be incorrect. - Verify that all bolts on the power cables between the PTO generator and the PTO Inverter are torqued firm. - Inverter hardware might be broken, contact Sleipner dealer.
21109.201.24	PTO Inverter Status Register 4, Port, Fault	PTO Port Inverter Fault in Status-Register 4 Possible causes: - Controller Overcurrent - Current Sensor Fault - Parameter Change Fault - Motor Open fault	Contact a Sleipner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V power (power knob on the outside of the PCU cabinet). - Cabling from the PTO inverter to the PTO generator might be incorrect. - Verify that all bolts on the power cables between the PTO generator and the PTO Inverter are torqued firm. - Inverter hardware might be broken, contact Sleipner dealer.

Fault Code	Fault Name	Fault Description	Action
21110.200.24	PTO Inverter Status Register 5, Starboard, Fault	PTO Starboard Inverter Fault in Status-Register 5 Possible causes: - Motortemp Sensor Fault - OS/Software fault - Stall detected	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Verify PTO generator temperature sensor cable correctly plugged and that the cable is not damaged - Cycle 24V supply (power knob on the outside of the PCU cabinet).
21110.201.24	PTO Inverter Status Register 5, Port, Fault	PTO Port Inverter Fault in Status-Register 5 Possible causes: - Motortemp Sensor Fault - OS/Software fault - Stall detected	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Verify PTO generator temperature sensor cable correctly plugged and that the cable is not damaged - Cycle 24V supply (power knob on the outside of the PCU cabinet).
21111.200.24	PTO Inverter Status Register 6, Starboard, Fault	PTO Starboard Inverter Fault in Status-Register 6 Possible causes: - Bad calibrations - Motortype fault - Supervisor fault - Motor characterization fault	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V supply (power knob on the outside of the PCU cabinet). - Verify that the PTO generator is an original part supplied by Slepner.
21111.201.24	PTO Inverter Status Register 6, Port, Fault	PTO Port Inverter Fault in Status-Register 6 Possible causes: - Bad calibrations - Motortype fault - Supervisor fault - Motor characterization fault	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V supply (power knob on the outside of the PCU cabinet). - Verify that the PTO generator is an original part supplied by Slepner.
21112.200.24	PTO Inverter Status Register 7, Starboard, Fault	PTO Starboard Inverter Fault in Status-Register 7 Possible causes: - Incorrect Model Number	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V supply (power knob on the outside of the PCU cabinet). - Check that the PTO inverter is an original part supplied by Slepner.
21112.201.24	PTO Inverter Status Register 7, Port, Fault	PTO Port Inverter Fault in Status-Register 7 Possible causes: - Incorrect Model Number	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V supply (power knob on the outside of the PCU cabinet). - Check that the PTO inverter is an original part supplied by Slepner.
21113.200.24	PTO Inverter Status Register 8, Starboard, Fault	PTO Starboard Inverter Fault in Status-Register 8 Possible causes: - Parameter mismatch - Severe KSI undervoltage	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V supply (power knob on the outside of the PCU cabinet) - Verify that the 24V supply is nominal - Check cable and connectors between PCU and PTO Inverter for damages or loose connections
21113.201.24	PTO Inverter Status Register 8, Port, Fault	PTO Port Inverter Fault in Status-Register 8 Possible causes: - Parameter mismatch - Severe KSI undervoltage	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V supply (power knob on the outside of the PCU cabinet) - Verify that the 24V supply is nominal - Check cable and connectors between PCU and PTO Inverter for damages or loose connections
21114.200.24	PTO Inverter Status Register 9, Starboard, Fault	PTO Starboard Inverter Fault in Status-Register 9 Possible causes: - Supervisor incompatible - PMAC Comissioning Needed - Driver supply issue	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V supply (power knob on the outside of the PCU cabinet) - Check that the PTO Generator is an original part supplied by Slepner.
21114.201.24	PTO Inverter Status Register 9, Port, Fault	PTO Port Inverter Fault in Status-Register 9 Possible causes: - Supervisor incompatible - PMAC Comissioning Needed - Driver supply issue	Contact a Slepner dealer if the fault does not go away despite clearing several times. Possible fixes: - Cycle 24V supply (power knob on the outside of the PCU cabinet) - Check that the PTO Generator is an original part supplied by Slepner.
21115.200.24	PTO Inverter Motor Temperature Sensor, Starboard, Fault	PTO Inverter STB Motortemp Sensor Fault - Likely not connected properly or damaged cable.	Check cabling/connectors for motortemp sensor between PTO Starboard Inverter and generator.
21115.200.56	PTO Inverter Motor Temperature Sensor, Starboard, Warningtemp	PTO Motor STB is too hot and performing a cutback on current generated.	Check coolant level, verify that the PTO cooling pumps are working.
21115.201.24	PTO Inverter Motor Temperature Sensor, Port, Fault	PTO Inverter Port Motortemp Sensor Fault - Likely not connected properly or damaged cable.	Check cabling/connectors for motortemp sensor between PTO Port Inverter and generator.
21115.201.56	PTO Inverter Motor Temperature Sensor, Port, Warningtemp	PTO Motor Port is too hot and performing a cutback on current generated.	Check coolant level, verify that the PTO cooling pumps are working.
21116.200.24	PTO Inverter Motor Encoder, Starboard, Fault	PTO Inverter STB Cos/Sin Sensor Fault - Likely not connected properly or damaged cable.	Check cabling/connectors for the generator rotational sensor (cos/sin sensor) between the PTO Starboard inverter and generator.
21116.201.24	PTO Inverter Motor Encoder, Port, Fault	PTO Inverter Port Cos/Sin Sensor Fault - Likely not connected properly/damaged cable.	Check cabling/connectors for the generator rotational sensor (cos/sin sensor) between the PTO Port inverter and generator.
21117.1.24	PCUM Upgrade Fault, Instance 1, Fault	PCUM 1 stuck in bootloader/upgrade failed.	Cycle power and give the system some time to upgrade the firmware. If the issue persists, consult dealer.
21117.2.24	PCUM Upgrade Fault, Instance 2, Fault	PCUM 2 stuck in bootloader/upgrade failed.	Cycle power and give the system some time to upgrade the firmware. If the issue persists, consult dealer.
21117.3.24	PCUM Upgrade Fault, Instance 3, Fault	PCUM 3 stuck in bootloader/upgrade failed.	Cycle power and give the system some time to upgrade the firmware. If the issue persists, consult dealer.
21117.4.24	PCUM Upgrade Fault, Instance 4, Fault	PCUM 4 stuck in bootloader/upgrade failed.	Cycle power and give the system some time to upgrade the firmware. If the issue persists, consult dealer.

Fault Code	Fault Name	Fault Description	Action
10103.0.10	Gearleg Oil - Level Low	Gearleg oil level is low	-Check level indicator on the external oil tank. If low oil level in tank, refill oil and check gearleg for leakage. -If oil level is ok, check that cable between TMU-1 and oil tank sensor is connected and not damaged.
10104.0.212	Motor Speed - Overspeed	Motor speed higher than 5.000 RPM	-Verify that Pulse Per Revolution configuration on TMU-1 matches RPM sensor specification. -Check that cable between TMU-1 and RPM sensor is connected and not damaged.

Fault Code	Description	Cause	Action
153.0.24	Supply Voltage, -, Fault	Supply Voltage Fault	-Check power connections
10101.0.55	Device CPU Temp, -, Overtemp	Main MCU temperature above max limit	-Wait for AMS to cool down
10105.0.13	Contactor Temperature Sensor, -, Open Circuit	AMS contactor temperature sensor open circuit	-If problem persist, consult Sleipner dealer.
10105.0.16	Contactor Temperature Sensor, -, Short Circuit	AMS contactor temperature sensor short circuit	-If problem persist, consult Sleipner dealer.
22000.0.0	AMS Manual Override, -, -	Main switch manually overridden	-Pull main switch
22001.0.0	AMS Fuse Blown, -, -	Fuse blown	-Replace fuse -Check if main cable from battery and main cable to thruster has been switched
22002.0.51	Coil, -, Current High	Contactor coil overcurrent or short circuit	Cycle power to unit and retry, if persistent, contact service
22003.0.55	Contactor, -, Overtemp	AMS contactor temperature above max limit	-Wait for AMS to cool down

Fault Code	Description	Cause	Action
10000.0.11	Motor Temp - Level High	Motortemp has been over 120C (248F)	Motor cool down below 110C (230F)
10000.0.13	Motor Temp - Open Circuit	Motor temperature sensor open circuit	-Check motor temperature sensor wires for open circuit.
10000.0.16	Motor Temp - Short Circuit	Motor temperature sensor short circuit	-Check motor temperature sensor wires for short circuit.
10003.0.11	Transistor Temperature - Level High	Actuator transistor temperature is high	-Control box needs to cool down
10200.0.54	System Voltage - Undervoltage	Low motor voltage alarm when motor is running. 12V thruster below 8.00V 24V thruster below 12.00V	-Recharge battery, reset or power OFF/ON device.
10600.0.210	Retract Controller - Service Mode	Retract controller in service mode. Switch no. 4 is ON.	-Check dip switch setting on retract control box.
10601.0.24	Retract Position Sensor - Fault	Position sensor fault	-Check position sensor cables and sensor for damage
10602.0.50	Retract Motion OUT Fault - Current Low	Actuator current is below 0.5A when deploying	-Check actuator connection or power to actuator. -If actuator is warm, try again when actuator has cooled down.
10602.0.51	Retract Motion OUT Fault - Current High	Retract obstructed while deploying	-Turn off all panels. Go for lower speed/deeper water and retry
10603.0.50	Retract Motion IN Fault - Current Low	Actuator current is below 0.5A when retracting	-Check actuator connection or power to actuator. -If actuator is warm, try again when actuator has cooled down.
10603.0.51	Retract Motion IN Fault - Current High	Retract obstructed while retracting	-Turn panel on and manually override main switch. Remove obstruction and try again.
10604.0.203	Retract Shaft - Not Calibrated	Shaft Not Calibrated	-See manual for how to calibrate.
20000.0.72	IPC - Contact After Deenergized	Solenoid has contact after de-energized	-Turn off thruster battery main switch. Thruster must be serviced by authorized personnel.
20000.0.73	IPC - Contact Before Energized	Solenoid has contact when not energized	-Turn off thruster battery main switch. Thruster must be serviced by authorized personnel.
20000.200.70	IPC Starboard No Contact Energized	Solenoid has no contact when energized to starboard side	-Turn off thruster battery main switch. Thruster must be serviced by authorized personnel.
20000.201.70	IPC Port No Contact Energized	Solenoid has no contact when energized to port side	-Turn off thruster battery main switch. Thruster must be serviced by authorized personnel.
30000.200.51	Thruster Solenoid Starboard Current High	Motor starboard solenoid high current	-Check starboard solenoid connections for short circuit
30000.201.51	Thruster Solenoid Port Current High	Motor port solenoid high current	-Check port solenoid connections for short circuit

SRC-3 Fault Codes

MC_0636

Fault Code	Fault Name	Fault Description	Action
100.0.0	System Error, -, -	System Error	Contact Sleipner Dealer
153.0.151	Supply Voltage, -, Self-Test Fault	Failed to determine voltage level of the system / Out of range.	Verify that the correct battery was chosen for this system and that it is properly charged.
10600.0.101	Retract Controller, -, Bus Off	Actuator CAN experienced Bus Off/Bus error.	Verify CAN cables to the actuators are correctly connected.
10600.0.210	Retract Controller, -, Service Mode	In Service Mode.	Exit service mode by using button controls.
10602.0.22	Retract Motion OUT Fault, -, Out of position	Lift or Lock Actuators went past their expected end-position when hatch deploying.	Inspect actuators and lifting arms for visual damage. Check fault specific data for more info. Contact Sleipner Dealer if problem is not resolved.
10602.0.51	Retract Motion OUT Fault, -, Current High	Blocked while deploying hatch.	Find and remove cause of mechanical blockage.
10603.0.22	Retract Motion IN Fault, -, Out of position	Lift or Lock Actuators went past their expected end-position when hatch retracting.	Inspect actuators and lifting arms for visual damage. Verify that the hatch fits the hull according to specification. Check fault specific data for more info. Contact Sleipner Dealer if problem is not resolved.
10603.0.51	Retract Motion IN Fault, -, Current High	Blocked while retracting hatch.	Find and remove cause of mechanical blockage.
10605.1.24	Lift Actuator, Instance 1, Fault	Lift Actuator 1 Reported a Fatal Error	Contact Sleipner Dealer.
10605.1.53	Lift Actuator, Instance 1, Overvoltage	Lift Actuator 1 Measured Overvoltage	Verify that the correct battery was chosen for this system.
10605.1.54	Lift Actuator, Instance 1, Undervoltage	Lift Actuator 1 Measured Undervoltage	Verify that battery is charged.
10605.1.55	Lift Actuator, Instance 1, Overtemp	Lift Actuator 1 Temperature Exceeding >85C	Find and eliminate cause of high temperature.
10605.1.100	Lift Actuator, Instance 1, No Communication	Lift Actuator 1 Not Communicating	Verify that CAN and supply cables are correctly connected, and that no fuses have gone out.
10605.1.209	Lift Actuator, Instance 1, MOTION FAULT	Lift Actuator 1 experienced linear motion while it was supposed to be in a fixed position. Load might have caused backdrive.	Look for mechanical obstruction/causes for the backdrive and remove them.
10605.2.24	Lift Actuator, Instance 2, Fault	Lift Actuator 2 Reported a Fatal Error	Contact Sleipner Dealer.
10605.2.53	Lift Actuator, Instance 2, Overvoltage	Lift Actuator 2 Measured Overvoltage	Verify that the correct battery was chosen for this system.
10605.2.54	Lift Actuator, Instance 2, Undervoltage	Lift Actuator 2 Measured Undervoltage	Verify that battery is charged.
10605.2.55	Lift Actuator, Instance 2, Overtemp	Lift Actuator 2 Temperature Exceeding >85C	Find and eliminate cause of high temperature.
10605.2.100	Lift Actuator, Instance 2, No Communication	Lift Actuator 2 Not Communicating	Verify that CAN and supply cables are correctly connected, and that no fuses have gone out.
10605.2.209	Lift Actuator, Instance 2, MOTION FAULT	Lift Actuator 2 experienced linear motion while it was supposed to be in a fixed position. Load might have caused backdrive.	Look for mechanical obstruction/causes for the backdrive and remove them.
10606.1.24	Lock Actuator, Instance 1, Fault	Lock Actuator 1 Reported a Fatal Error, could be broken.	Contact Sleipner Dealer.
10606.1.53	Lock Actuator, Instance 1, Overvoltage	Lock Actuator 1 Measured Overvoltage	Verify that the correct battery was chosen for this system.
10606.1.54	Lock Actuator, Instance 1, Undervoltage	Lock Actuator 1 Measured Undervoltage	Verify that battery is charged.
10606.1.55	Lock Actuator, Instance 1, Overtemp	Lock Actuator 1 Temperature Exceeding >85C	Find and eliminate cause of high temperature.
10606.1.100	Lock Actuator, Instance 1, No Communication	Lock Actuator 1 Not Communicating	Verify that CAN and supply cables are correctly connected, and that no fuses have gone out.
10606.1.209	Lock Actuator, Instance 1, MOTION FAULT	Lock Actuator 1 experienced linear motion while it was supposed to be in a fixed position. Load might have caused backdrive.	Look for mechanical obstruction/causes for the backdrive and remove them.
10607.0.209	Actuator Alignment Fault, -, MOTION FAULT	There was a position discrepancy between the lift actuators, but alignment failed.	Look for mechanical obstruction/causes for alignment failure.
40008.0.206	Sensor Fault 6, -, WRITE FAIL	EEPROM failed to write.	Contact Sleipner Dealer.

AMS-3 Fault Codes

MC_0987

Fault Code	Description	Cause	Action
153.0.24	Supply Voltage, -, Fault	Supply Voltage Fault	-Check power connections
10101.0.55	Device CPU Temp, -, Overtemp	Main MCU temperature above max limit	-Wait for AMS to cool down
10105.0.13	Contactors Temperature Sensor, -, Open Circuit	AMS contactor temperature sensor open circuit	-If problem persist, consult Sleipner dealer.
10105.0.16	Contactors Temperature Sensor, -, Short Circuit	AMS contactor temperature sensor short circuit	-If problem persist, consult Sleipner dealer.
22000.0.0	AMS Manual Override, -, -	Main switch manually overridden	-Pull main switch
22001.0.0	AMS Fuse Blown, -, -	Fuse blown	-Replace fuse -Check if main cable from battery and main cable to thruster has been switched
22002.0.51	Coil, -, Current High	Contactors coil overcurrent or short circuit	Cycle power to unit and retry, if persistent, contact service
22003.0.55	Contactors, -, Overtemp	AMS contactor temperature above max limit	-Wait for AMS to cool down

Below are Generic Fault Codes listed. For legacy reasons this system is used on old products and products with old firmware versions.

"Err. No."	Errors shown in display	"Auto Reset"	"Ext. buzzer activation at Alert Level"	Description	Action
1	Motor Overcurrent		2 ⁽²⁾ , 3	Motor current too high.	"Thruster must be serviced by authorized personnel, reset or power OFF/ON PPC ⁽¹⁾ ."
2	Motor Overtemp	Yes	2 ⁽²⁾ , 3	"Motortemp has been over 120°C/248°F."	Motor cool down below 110°C /230°F.
3	Controller Overtemp		2 ⁽²⁾ , 3	"PPC ⁽¹⁾ temp has been over 80°C/176°F."	PPC ⁽¹⁾ cool down below 45°C/113°F.
4	Controller Overtemp		2 ⁽²⁾ , 3	"SR150000 temp has been over 80°C/176°F."	SR150000 cool down below 45°C /113°F.
5	Low Voltage		2 ⁽²⁾ , 3	Low motor voltage alarm when motor is running. 12V thruster below 8.00V 24V thruster below 12.00V	Recharge battery, reset or power OFF/ ON device.
6	Thermoswitch	Yes	2 ⁽²⁾ , 3	Thermo switch input is activated and there is an open circuit.	The thruster needs to cool down before operating again.
7	IPC Error		2 ⁽²⁾ , 3	Motor relay fault	"Turn off thruster battery main switch. Thruster must be serviced by authorized personnel."
8	Critical Error		2 ⁽²⁾ , 3	PPC ⁽¹⁾ output fail	PPC ⁽¹⁾ must be sent for service.
9	Low Motor Current		2 ⁽²⁾ , 3	Thruster uses no power	Check thruster connections or motor dead!
10	Motor Contactor		2 ⁽²⁾ , 3	No current on motor relay coil.	Check motor relay connections, short circuit or relay dead!
11	System Error		2 ⁽²⁾ , 3	Fatal error	Device must be serviced by authorized personnel
12	No Communication		2 ⁽²⁾ , 3	No communication with device	Check S-Link cables and power connections.
13	Motor Temp Sensor		2 ⁽²⁾ , 3	Motor temperature sensor fail	Check for an open circuit on the temp sensor on the motor
14	Supply Voltage Fault		2 ⁽²⁾ , 3	No power	Check power connections
15	Fuse Blown		2 ⁽²⁾ , 3	Fuse blown	Replace fuse or check if main cable from battery and main cable to thruster has been switched
16	Manual Override	Yes	2 ⁽²⁾ , 3	Main switch manually overridden	Pull main switch
17	Motion OUT Fault		2 ⁽²⁾ , 3	Retract obstructed while deploying	Turn off all panels. Go for lower speed/ deeper water and retry.
18	Motion IN Fault		2 ⁽²⁾ , 3	Retract obstructed while retracting	Turn panel on and manually override main switch. Remove obstruction and try again.

1. PPC520, PPC820, PPC800, PPC840

2. Buzzer is only activated when any device is sending thrust on the S-Link bus.

"Err. No."	Errors shown in display	"Auto Reset"	"Ext. buzzer activation at Alert Level"	Description	Action
19	Actuator Fault		2 ⁽²⁾ , 3	Actuator not getting any power	"Check actuator connection or power to actuator. Reset alarm in alarm menu on PJC 211/212/221/222 or recycle power."
20	Pos.Sensor Fault		2 ⁽²⁾ , 3	Retract position sensor fail	Check position sensor cables and for sensor damage.
21	In Service Mode	Yes	2 ⁽²⁾ , 3	"Retract controller in service mode. Switch no. 4 is ON."	Check dip switch setting on retract control box.
22	High Oil Temp	Yes	1, 2 ⁽²⁾ , 3	"Hydraulic oil temperature is higher than 75°C /167°F."	"Stop running and wait for temperature to drop. Check if cooling pump is running."
23	Low Oil Level		1, 2 ⁽²⁾ , 3	Hydraulic oil level is to low	Fill more hydraulic oil to the hydraulic tank.
24	Warning Return Filter	Yes	2 ⁽²⁾ , 3		Return filter element required replacing.
25	Warning Pressure Filter	Yes	2 ⁽²⁾ , 3		Pressure filter element required replacing.
26	Warning High Speed	Yes	1, 2 ⁽²⁾ , 3	"WARNING! High Speed. Stabilizer not active!"	
27	Stabilizer Fault	Yes	1, 2 ⁽²⁾ , 3	Any Stabilizer alarm.	See stabilizer panel for more info.
28	AC Motor Overtemp	Yes	1, 2 ⁽²⁾ , 3	"Hydraulic AC motor power pack overtemp. Higher than 120°C/248°F."	Stop running and wait for temperature to drop.
29	AC Motor Sensor Fail		2 ⁽²⁾ , 3	"Hydraulic AC motor power pack temp sensor open circuit"	Check sensor cables.
30	Temperature Warning	Yes	2 ⁽²⁾ , 3 ⁽²⁾	High temperature warning.	Warns that the motor temperature is getting high.
31	Motor Overtemp	Yes	1, 2 ⁽²⁾ , 3	High temperature Alarm.	See SAC manual for more details.
32	VFD Warning	Yes	2 ⁽²⁾ , 3	There is an warning from VFD.	Check VFD for more details.
33	VFD Not Ready	Yes	2 ⁽²⁾ , 3	The VFD is not ready.	Check VFD for more details.
34	VFD Fault		1, 2 ⁽²⁾ , 3	VFD has an Alarm.	Check VFD for more details.
35	Warning Low Voltage	Yes	2 ⁽²⁾ , 3 ⁽²⁾	Low motor voltage warning when motor is running. 12V thruster below 9.30V 24V thruster below 17.50V	
36	Not Calibrated	Yes	2 ⁽²⁾ , 3	Shaft Not Calibrated	See manual for how to calibrate.
37	VFD Com. Fault		2 ⁽²⁾ , 3	No Modbus communication with VFD	Check VFD Modbus cables and power.
38	Cooling Fan Fault		2 ⁽²⁾ , 3	Cooling fan stopped running, or running too slow	Device must be sent for service
39	Interlock		2 ⁽²⁾ , 3	S-Link communication between PPC and retract controller are missing	-Check PPC or retract controller has power. -Check S-Link connections to PPC and retract controller. -Check if not PPC or SR150000/SR61242 is wrongly setup as SRP or SRVP/SRLP.

1. PPC520, PPC820, PPC800, PPC840

2. Buzzer is only activated when any device is sending thrust on the S-Link bus.

Before seeking assistance at the help desk from your Sleipner dealer/ distributor, please perform these tests.

(NB: All checkpoints and solutions must be carried out after consulting the relevant information elsewhere in this manual to understand how the system is intended to work. If you are unable to understand what to check, you must consult a professional.)

Alarm code	Errors shown on display	Auto Rest	Ext. Buzzer activation at Alert Level ¹	Description	Action
1	Motor Over-current		2 ⁽²⁾ , 3	Motor current too high.	"Thruster must be serviced by authorized personnel, reset or power OFF/ON PPC ⁽¹⁾ ."
2	Motor Over-temp	Yes	2 ⁽²⁾ , 3	"Motor-temp has been over 120°C/248°F."	Motor cool down below 110°C /230°F.
3	Controller Over-temp		2 ⁽²⁾ , 3	"PPC ⁽¹⁾ temp has been over 80°C/176°F."	PPC ⁽¹⁾ cool down below 45°C/113°F.
4	Controller Over-temp		2 ⁽²⁾ , 3	"SR150000 temp has been over 80°C/176°F."	SR150000 cool down below 45°C /113°F.
5	Low Voltage		2 ⁽²⁾ , 3	Low motor voltage alarm when motor is running. 12V thruster below 8.00V 24V thruster below 12.00V	Recharge battery, reset or power OFF/ON device.
6	Thermoswitch		2 ⁽²⁾ , 3	Thermo switch input is activated and there is an open circuit.	The thruster needs to cool down before operating again.
7	IPC Error		2 ⁽²⁾ , 3	Motor relay fault	"Turn off thruster battery main switch. Thruster must be serviced by authorized personnel."
8	Critical Error		2 ⁽²⁾ , 3	PPC ⁽¹⁾ output fail	PPC ⁽¹⁾ must be sent for service.
9	Low Motor Current		2 ⁽²⁾ , 3	Thruster uses no power	Check thruster connections or motor dead!
10	Motor Contact		2 ⁽²⁾ , 3	No current on motor relay coil.	Check motor relay connections, short circuit or relay dead!
11	System Error		2 ⁽²⁾ , 3	Fatal error	Device must be serviced by authorized personnel
12	No Communication		2 ⁽²⁾ , 3	No communication with device	Check S-Link cables and power connections.
13	Motor Temp Sensor		2 ⁽²⁾ , 3	Motor temperature sensor fail	Check for an open circuit on the temp sensor on the motor
14	Supply Voltage Fault		2 ⁽²⁾ , 3	No power	Check power connections
15	Fuse Blown		2 ⁽²⁾ , 3	Fuse blown	Replace fuse or check if main cable from battery and main cable to thruster has been switched
16	Manual Override	Yes	2 ⁽²⁾ , 3	Main switch manually overridden	Pull main switch
17	Motion OUT Fault		2 ⁽²⁾ , 3	Retract obstructed while deploying	Turn off all panels. Go for lower speed/deeper water and retry.
18	Motion IN Fault		2 ⁽²⁾ , 3	Retract obstructed while retracting	Turn panel on and manually override main switch. Remove obstruction and try again.
19	Actuator Fault		2 ⁽²⁾ , 3	Actuator not getting any power	"Check actuator connection or power to actuator. Reset alarm in alarm menu on PJC 211/212/221/222 or recycle power."
20	Pos.Sensor Fault		2 ⁽²⁾ , 3	Retract position sensor fail	Check position sensor cables and for sensor damage.
21	In Service Mode	Yes	2 ⁽²⁾ , 3	"Retract controller in service mode. Switch no. 4 is ON."	Check dip-switch setting on retract control box.
22	High Oil Temp	Yes	1, 2 ⁽²⁾ , 3	"Hydraulic oil temperature is higher than 75°C /167°F."	"Stop running and wait for temperature to drop. Check if cooling pump is running."

Notes:

1. PPC520, PPC820, PPC840 & PPC800

2. Buzzer is only activated when any thruster device is operated. (Sending thrust on the S-link bus.)

Before seeking assistance at the help desk from your Sleipner dealer/ distributor, please perform these tests.

(NB: All checkpoints and solutions must be carried out after consulting the relevant information elsewhere in this manual to understand how the system is intended to work. If you are unable to understand what to check, you must consult a professional.)














Alarm code	Errors shown on display	Auto Rest	Ext. Buzzer activation at Alert Level ¹	Description	Action
23	Low Oil Level		1, 2 ⁽²⁾ , 3	Hydraulic oil level is to low	Fill more hydraulic oil to the hydraulic tank.
24	Warning Return Filter	Yes	2 ⁽²⁾ , 3		Return filter element required replacing.
25	Warning Pressure Filter	Yes	2 ⁽²⁾ , 3		Pressure filter element required replacing.
26	Warning High Speed	Yes	1, 2 ⁽²⁾ , 3	"WARNING! High Speed. Stabilizer not active!"	
27	Stabilizer Fault	Yes	1, 2 ⁽²⁾ , 3	Any Stabilizer alarm.	See stabilizer panel for more info.
28	AC Motor Over-temp	Yes	1, 2 ⁽²⁾ , 3	"Hydraulic AC motor power pack over-temp. Higher than 120°C/248°F."	Stop running and wait for temperature to drop.
29	AC Motor Sensor Fail		2 ⁽²⁾ , 3	"Hydraulic AC motor power pack temp sensor open circuit"	Check sensor cables.
30	Temperature Warning	Yes	2 ⁽²⁾ , 3 ⁽²⁾	High temperature warning.	Warns that the motor temperature is getting high.
31	Motor Over-temp	Yes	1, 2 ⁽²⁾ , 3	High temperature Alarm.	See SAC manual for more details.
32	VFD Warning	Yes	2 ⁽²⁾ , 3	There is an warning from VFD.	Check VFD for more details.
33	VFD Not Ready	Yes	2 ⁽²⁾ , 3	The VFD is not ready.	Check VFD for more details.
34	VFD Fault		1, 2 ⁽²⁾ , 3	VFD has an Alarm.	Check VFD for more details.
35	Warning Low Voltage	Yes	2 ⁽²⁾ , 3 ⁽²⁾	Low motor voltage warning when motor is running. 12V thruster below 9.30V 24V thruster below 17.50V	
36	Not Calibrated	Yes	2 ⁽²⁾ , 3	Shaft Not Calibrated	See manual for how to calibrate.
37	VFD Com. Fault		2 ⁽²⁾ , 3	No Modbus communication with VFD	Check VFD Modbus cables and power.
38	Cooling Fan Fault		2 ⁽²⁾ , 3	Cooling fan stopped running, or running too slow	Device must be sent for service
39	Interlock		2 ⁽²⁾ , 3	S-link communication between PPC and retract controller are missing	-Check PPC or retract controller has power. -Check S-Link connections to PPC and retract controller. -Check if not PPC or SR150000/SR61242 is wrongly setup as SRP or SRVP/SRLP.

Notes:

1. PPC520, PPC820, PPC840 & PPC800
2. Buzzer is only activated when any thruster device is operated. (Sending thrust on the S-link bus.)

Fault Number	Fault Description	Helm Station	Version - MK1 / MK 2 (Possible Cause)	Version - MK3 (Possible Cause)	Check / Action / Comments
1	Steering stopped working, no alarms		No power	No power	-Check Circuit Breaker -Check voltage on B+/B- terminals
			Motor broken	Motor broken	Replace Motor
			Worn Brushes		-ESPE 600/700 motor without fan, replace complete motor -Other motors, replace brushes
			Motor Starter Relay broken	N/A (Will cause alarm)	Change Relay
			Loom ECU to relay broken	N/A (Will cause alarm)	
			Corrosion on motor relay spade terminals.	N/A (Will cause alarm)	
2	No end stop	Both helms:	Pressure switch adjustment	Pressure switch adjustment	Check end stop LED (orange) at PCB, adjust switch
			Broken pressure switch	Broken pressure switch	Replace switch
		Lower helm only:	Pressure switch adjustment	Pressure switch adjustment	Check end stop LED (orange) at PCB, adjust switch
			Broken pressure switch	Broken pressure switch	Replace switch
			Lock valve sticking in open position	Lock valve sticking in open position	-Remove valve cartridge from main valve unit. -Connect 24V to coil and check spool movement.
			No oil in helm/system not pressurized	No oil in helm/system not pressurized	Refill, and run air purging procedure.
		Upper helm only:	End stop brake broken	End stop brake broken	Connect 24V to brake connector, check brake, check loom
			Brake signal failure	Brake signal failure	
3	Bad performance, weak steering		Worn Cylinder Piston Seals	Worn Cylinder Piston Seals	Replace Seals, or install new Cylinder.
			Worn hydraulic Pump	Worn hydraulic Pump	Replace Pump
4	Creeping Rudder		Leaking load Holding Valves	Leaking load Holding Valves	Valves to be adjusted
			Leaking Cylinder Piston Seal	Leaking Cylinder Piston Seal	Replace Seals, or install new Cylinder.
5	Grey / White oil		Water in oil	Water in oil	-Replace complete system -Replace Cooler kit. NB! To be discussed.
6	Unstable steering, temporary failures no alarms. Grey/White oil		Water in oil	Water in oil	-Replace complete system -Replace Cooler kit. NB! To be discussed.
7	No steering, no alarms, no fall back to backup from lower helm.		Sticking lock/bypass valve	Sticking lock/bypass valve	Water in oil, see pt. 5 - 6
			Motor stopped, see fault no.1	Motor stopped, see fault no.1	Change complete Motor.
			Sticking rely	N/A (Will cause alarm)	Change relay NB! Switch off circuit breaker for backup
8	No steering from Helm. Works fine from Pilot		Missing signal from helm	Missing signal from helm	Check green/red signal input led on PCB.
9	Alarm during Prt only		Valve coil broken	Valve coil broken	Check Coil resistance, to be 39,3Ω @20°C
			Connector failure or broken loom	Connector failure or broken loom	
10	Alarm during Stb only		Valve coil broken	Valve coil broken	Check Coil resistance, to be 39,3Ω @20°C
			Connector failure or loom failure	Connector failure or loom failure	
11	Alarm, both Prt and Stb		Servo valve coil broken	Servo valve coil broken	Check Coil resistance, to be 21,7Ω @20°C
				Lock Valve Coil Broken	Check Coil resistance, to be 39,3Ω @20°C
			Connector failure or loom failure	Connector failure or loom failure	
			Relay failure	Relay failure	

Fault Type	Fault Description	Version - MK1 / MK 2 (Possible Cause)	Version - MK3 (Possible Cause)	Check / Action / Comments
1	Motor stops immediately	Coil failure, servo valve	Coil failure, servo valve	Check Coil resistance, to be 21,7Ω @20°C
		Coil failure, directional valves	Coil failure, directional valves	Check Coil resistance, to be 39,3Ω @20°C
		Loom failure	Coil failure, lock valve	Check Coil resistance, to be 39,3Ω @20°C
			Motor starter relay failure	
			Loom failure	
			Low voltage	Alarms < 18V
2	System continue working for 2 minutes. Motor stops if alarm situation is still present after 2 minutes	Oil temperature	Oil temperature	-Check Oil temperature and cooling. -Check Sensor resistance, <130 Ω
		Motor temperature	Motor temperature	Check Switch (NC) Check Motor temp sticker.

LED	PANEL ALARM INDICATION	FAULT	THRUSTER RESPONSE	SOLUTION
1 	1 flash YELLOW & GREEN - pause	Thruster, overtemp	Retracts	Turn off panel, wait for 20 min
2 	2 flash YELLOW & GREEN - pause	Thruster, low power	Retracts	Turn off panel, charge batteries
3 	3 flash YELLOW & GREEN - pause	Deploy operation obstructed	Retracts	Turn off panel, Go for lower speed/ deeper water - Retry.
4 	4 flash YELLOW & GREEN - pause	SR150000 position sensor fail	Retracts	Position sensor short or open circuit Check wiring and connection
5 	5 flash YELLOW & GREEN - pause	SR150000 solenoid output short circuit, port or star-board	Retracts	Check solenoid wiring and connection, and check if solenoid has blown
6 	6 flash YELLOW & GREEN - pause	SR150000 motor temp sensor fail	Retracts	Check motor temp sensor, wiring and connection
1 	1 flash YELLOW & RED - pause	Power failure, Actuator	System shuts down	Turn off panel, check actuator connections - Retry
2 	2 flash YELLOW & RED - pause	Thruster IPC error	Retracts	Turn off panel - Thruster must be serviced by authorised personal
3 	3 flash YELLOW & RED - pause	Retract operation obstructed	Aborts retract, deploys and retries to retract 3 times. If operation still in obstructed, retract stops on obstruction	Press both ON-buttons to deploy thruster. Turn main switch off. Remove obstruction.
1 	1 flash YELLOW, GREEN & RED - pause	Automatic main switch power failure	None	Check power to automatic main switch.
2 	2 flash YELLOW, GREEN & RED - pause	Automatic main switch fuse blown	None	Replace fuse on automatic main switch. If a new installation, check if input and output is connected correctly.
3 	3 flash YELLOW, GREEN & RED - pause	Automatic main switch manual override	None	Pull up automatic main switch
4 	4 flash YELLOW, GREEN & RED - pause	Panel has no contact with thruster	None	Turn off panel. Check main switch, fuse, cables and connections - Retry

(NB: THE MAIN SWITCH MUST BE TURNED OFF IMMEDIATELY WHEN AN IPC-ERROR OCCURS, TO PREVENT OVERHEATING OF THE THRUSTER MAIN RELAYS.)

THRUSTER WILL NOT RETRACT WHILE REVERSING AT "HIGH" SPEED. THIS WILL TRIGGER THE "Retract operation obstructed" ALARM.

IF ALARM IS TRIGGERED, REDUCE SPEED AND PRESS BOTH "ON" BUTTONS BEFORE RETRYING "OFF" BUTTON

Introduction:

At Sleipner Group, we prioritize sustainability and encourage the repair and re-manufacturing of products to extend their life cycles. If disposal is necessary, please follow these guidelines to recycle and manage waste responsibly, ensuring our efforts align with environmental protection efforts.

Electric Motors and Electronics:

- Disconnect from any power sources and dismantle them carefully.
- Recycle components through certified e-waste recycling centers that can adequately handle and recover electronic materials.
- Dispose of any non-recyclable electronic parts according to local environmental regulations.

Metals:

- Collect and sort metal parts for recycling as scrap metal.
- To increase recycling efficiency, ensure that metals are clean and free from non-metal attachments.

Plastics:

- Identify recyclable plastics based on local recycling guidelines.
- Remove any non-plastic components and clean them before recycling to improve the quality of the recycled material.

Hazardous Materials:

- Correctly identify any hazardous substances within components, such as batteries or capacitors etc.
- Follow local regulations for the safe disposal of hazardous materials to prevent pollution and protect environmental health.

General Disposal Instructions:

- Consult local recycling programs to determine the acceptability of various materials.
- Use authorized disposal services to ensure compliance with environmental standards.

Safe Disposal Practices:

- Adhere to local laws and regulations for waste management to minimize environmental impact and ensure community safety.

This guide is designed to help reduce our products' environmental footprint through responsible end-of-life management. Please contact your local waste management supplier or our support team for more specific disposal information or further assistance.

Find your local professional dealer from our certified worldwide network for expert service and support. visit our website www.sleipnergrou.com/support

Product spare parts and additional resources

For additional supporting documentation, we advise you to visit our website www.sleipnergrou.com and find your Sleipner product.

Warranty statement

1. Sleipner Motor AS (The “Warrantor”) warrants that the equipment (parts, materials, and embedded software of products) manufactured by the Warrantor is free from defects in workmanship and materials for purpose for which the equipment is intended and under normal use and maintenance service (the “Warranty”).
2. This Warranty is in effect for two years (Leisure Use) or one year (Commercial and other Non-leisure Use) from the date of delivery/purchase by the end user, with the following exceptions;
 - (a) For demonstration vessels, or vessels kept on the water, the dealer is considered as the end user from 6 months after their launch of the vessel;
 - (b) The warranty period starts no later than 18 months after the first launch of the vessel.
 Please note that the boat manufacturer and dealer must pay particular attention to correct maintenance and service both by the products manuals as well as general good practice for the location the boat is kept in the period the boat is in their care. In cases where the 6 and 18 months grace periods for boat builders and dealers are passed, it is possible to obtain a full warranty upon inspection and approval of the warrantor or such representative.
3. Certain parts, classified as wearable or service parts, are not covered by the warranty. A failure to follow the required maintenance and service work as described in the product manual render all warranty on parts or components directly or indirectly affected by this void. Please also note that for some parts, time is also a factor separately from actual operational hours.
4. This Warranty is transferable and covers the equipment for the specified warranty period.
5. The warranty does not apply to defects or damages caused by faulty installation or hook-up, abuse or misuse of the equipment including exposure to excessive heat, salt or fresh water spray, or water immersion except for equipment specifically designed as waterproof.
6. In case the equipment seems to be defective, the warranty holder (the “Claimant”) must do the following to make a claim:
 - (a) Contact the dealer or service centre where the equipment was purchased and make the claim. Alternatively, the Claimant can make the claim to a dealer or service centre found at www.sleipnergrou.com. The Claimant must present a detailed written statement of the nature and circumstances of the defect, to the best of the Claimant’s knowledge, including product identification and serial nbr., the date and place of purchase and the name and address of the installer. Proof of purchase date should be included with the claim, to verify that the warranty period has not expired;
 - (b) Make the equipment available for troubleshooting and repair, with direct and workable access, including dismantling of furnishings or similar, if any, either at the premises of the Warrantor or an authorised service representative approved by the Warrantor. Equipment can only be returned to the Warrantor or an authorised service representative for repair following a pre-approval by the Warrantor’s Help Desk and if so, with the Return Authorisation Number visible postage/shipping prepaid and at the expense of the Claimant.
7. Examination and handling of the warranty claim:
 - (a) If upon the Warrantor’s or authorised service Representative’s examination, the defect is determined to result from defective material or workmanship in the warranty period, the equipment will be repaired or replaced at the Warrantor’s option without charge, and returned to the Purchaser at the Warrantor’s expense. If, on the other hand, the claim is determined to result from circumstances such as described in section 4 above or a result of wear and tear exceeding that for which the equipment is intended (e.g. commercial use of equipment intended for leisure use), the costs for the troubleshooting and repair shall be borne by the Claimant;
 - (b) No refund of the purchase price will be granted to the Claimant, unless the Warrantor is unable to remedy the defect after having a reasonable number of opportunities to do so. In the event that attempts to remedy the defect have failed, the Claimant may claim a refund of the purchase price, provided that the Claimant submits a statement in writing from a professional boating equipment supplier that the installation instructions of the Installation and Operation Manual have been complied with and that the defect remains.
8. Warranty service shall be performed only by the Warrantor, or an authorised service representative, and any attempt to remedy the defect by anyone else shall render this warranty void.
9. No other warranty is given beyond those described above, implied or otherwise, including any implied warranty of merchantability, fitness for a particular purpose other than the purpose for which the equipment is intended, and any other obligations on the part of the Warrantor or its employees and representatives.
10. There shall be no responsibility or liability whatsoever on the part of the Warrantor or its employees and representatives based on this Warranty for injury to any person or persons, or damage to property, loss of income or profit, or any other incidental, consequential or resulting damage or cost claimed to have been incurred through the use or sale of the equipment, including any possible failure or malfunction of the equipment or damages arising from collision with other vessels or objects.
11. This warranty gives you specific legal rights, and you may also have other rights which vary from country to country.

Patents

At Sleipner we continually reinvest to develop and offer the latest technology in marine advancements. To see the many unique designs we have patented, visit our website www.sleipnergrou.com/patents

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Learn more about our products at
www.sleipnergroun.com



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