

## Chapter 4.0

# Troubleshooting the KMACS 5 System

### 4.1 General

The KMACS 5 is an extremely simple system which should not malfunction if the instructions in this manual are followed. Most problems encountered in using the system can be easily remedied. The following information covers the common operating difficulties.

### 4.2 No Communications

Symptoms	Probable Cause(s)	Remedy
1) No sound at either KMACS 5 or diver's mask.	a) Communication power not on.  b) Communications incorrectly hooked up.  c) Communications not hooked up	Activate switch and adjust volume.  Switch terminal wires.  Plug into terminals.
2) Battery indicator does not respond.	Battery low or dead.	Charge or replace battery, or bypass battery with external power
3) Communications weak or broken up.	a) Terminals covered with corrosion.  b) Loose or nearly broken wires	Clean Terminals with wire brush to bright shiny metal.  Trim back wires to full thickness
4) Communications will not work with headset but works otherwise.	Headset not working Short in internal wiring.	Replace headset. Return to factory for repair
5) Communications interrupted when umbilical is moved.	Break in diver's communication wire.	Splice wire if damage is minor. Replace wire if damage is major.
6) Communications interrupted when waterproof connector is moved.	Break in splice at waterproof connector or failure of connector. Test with VOM.	Replace splice or connector.
7) Satisfactory communications through one earphone or microphone only (4 wire mode).	a) One wire in cable is broken  b) Microphone/earphones dead.	Stack connectors in microphone terminals. Communications works in two wire mode.  Replace microphone/earphones.
8) No sound at either KMACS 5 or mask.	Communicator not functional.	Return to factory for repair after verifying no cure by following above procedures.

### 4.3 No Pneumo Reading

Symptoms	Probable Cause(s)	Remedy
1) No air to diver's end of pneumo	a) Pneumo hose not connected  b) Pneumo plugged	Attach fittings to KMACS 5  Flush hose with air to clear
2) Gauge reads sustained pressure at surface.	Pneumo crimped or plugged.	Check entire length of hose. Relieve any restrictions.

## Kirby Morgan Air Control System 5

Symptoms	Probable Cause(s)	Remedy
3) Hose will not hold pressure and gauge needle will not rise.	Pneumo fitting cracked or loose.	Check fittings at console with soap and water solution. If fittings bubble, either tighten or replace as necessary.
4) Needle will not respond properly to flow.	a) Hole in pneumo hose.	Check hose; replace or splice as necessary.
	b) Gauge mechanism damaged.	Replace or repair gauge. Return to factory.
5) Air can be heard escaping into console interior.	KMACS 5 internal plumbing may be cracked or broken.	Return to factory for service.

### 4.4 No Air To Diver

Symptoms	Probable Cause(s)	Remedy
1) No hose pressure in diver's umbilical	a) primary air source not connected.	Connect proper hose to console.
	b) Valve closed at low pressure source	Open valve at low pressure compressor.
	c) Selector valve in "H.P. OFF" zone.	Move selector valve handle in line with flow from either high pressure source.
2) No gauge reading on high pressure gauge.	a) Valve closed at high pressure source	Open valve at high pressure source.
	b) No Air	Install full supply
3) Low hose pressure in diver's umbilical.	a) Regulator not properly loaded.	Rotate adjustment wheel in appropriate direction.
	b) Low H.P. supply	Switch over to full tank
4) Air can be heard escaping from hose.	Fitting loose on diver's hose, or fittings damaged.	Tighten fittings until snug. Do not over tighten. Replace fittings if damaged.
5) Umbilical registers pressure at console gauge, but no flow at mask.	a) Mask improperly serviced.	Clean and adjust mask.
	b) Blockage in supply hose	Clear blockage from hose
6) Air can be heard escaping into console interior.	Leakage in KMACS 5 plumbing.	Return KMACS 5 to factory for service.
7) Umbilical hose pressure and supply pressure drops rapidly.	Diver's Umbilical cut or severed.	Replace diver's hose.
8) With high pressure air on and regulator loaded, no umbilical pressure.	Regulator malfunction.	Return KMACS 5 to factory for service