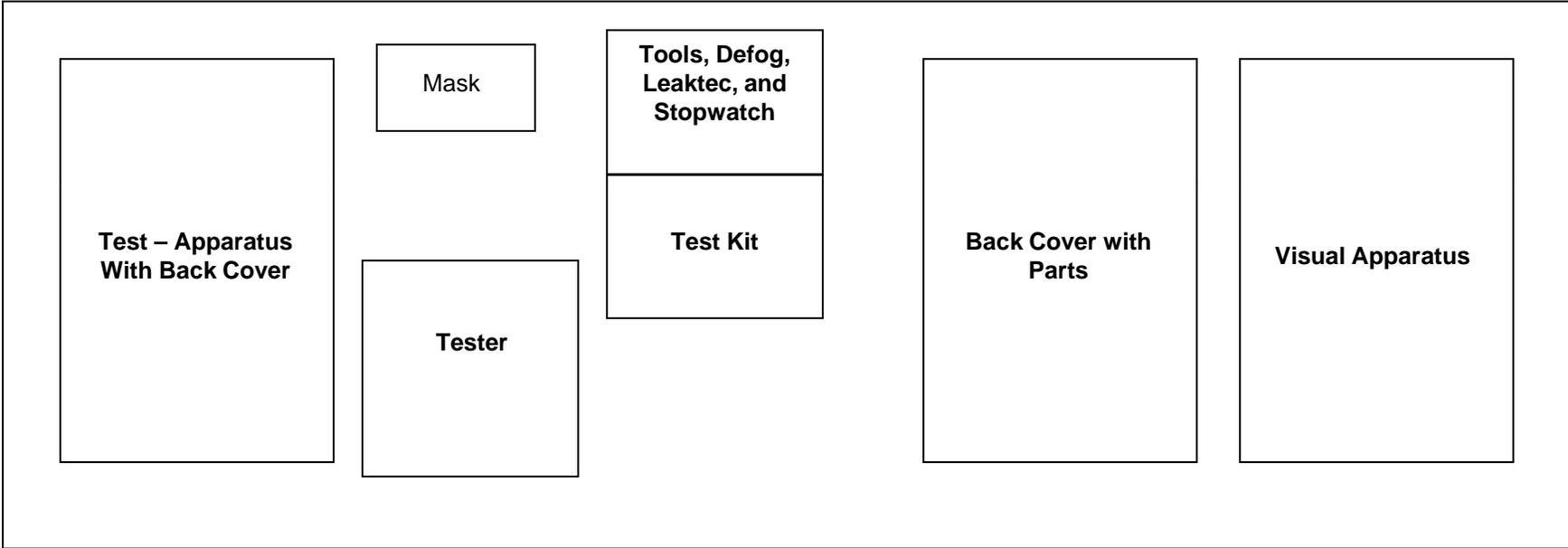


# Table Layout for BG-4 Contest



VISUAL APPARATUS CHECKS		HAND TIGHT CONNECTIONS	
✓	<i>Check if ok</i>		· Cap on Drain Valve
	<b>FRAME</b>		· Drain Valve to Breathing Bag
	· Harness Assembly		· Minimum Valve to Breathing Bag
	· Anti-vibe Strap		· Minimum Valve to O2 Supply Line/ <b>Hose</b>
	· Switchbox/Sentinel/Sealing Rings/O2 Reg		· Cylinder Connection
	· Backcover		· Regenerative Canister Connections
	<b>BREATHING BAG</b>		· Relief Valve to Regenerative Canister
	· Sealing Surfaces		· Cooler to Breathing Bag
	· Manipulate or Massage (pliability)		· Distribution Hose
	· Minimum Valve & Drain Valve		· Breathing Hoses
	· Lever		· Hose Adapter on RZ-25 or Test-It 6100
	· Springs		<b>TEST APPARATUS</b>
	<b>CYLINDER TEST</b>	✓	<i>Check if ok</i>
	· Hydrostatic Test Date		<b>ZERO ADJUSTMENT ON TESTER</b>
	· Cylinder Pressure on Gauge		<b>LOW PRESSURE WARNING TEST</b>
	· Pressure Rating on Cylinder		<b>INHALATION VALVE TEST</b>
	<b>REGENERATIVE CANISTER</b>		<b>EXHALATION VALVE TEST</b>
	· Check for Defects		<b>DRAIN VALVE TEST</b>
	· Sealing Surfaces		<b>LEAK TEST with POSITIVE PRESSURE</b>
	· Expiration Date or Screens/Filler Mats/Seal		<b>RELIEF VALVE TEST</b>
	· Seal Strap with Tension Spring Hook		· State Opening Pressure
	<b>RELIEF VALVE</b>		<b>HIGH PRESSURE LEAK TEST</b>
	· Check for Defects		<b>CONSTANT METERING VALVE TEST</b>
	· Valve/O-Ring		· State Final Reading
	<b>COOLER</b>		<b>MINIMUM VALVE TEST</b>
	· Check for Defects		· State Opening Pressure
	· Sealing Surfaces		<b>BYPASS VALVE TEST</b>
	<b>HOSES</b>		<b>LOW PRESSURE WARNING TEST</b>
	· Sealing Edges/ <b>Surfaces</b>		· State Warning Reading
	· Stretching of Hose for Pliability		<b>BATTERY TEST</b>
	· Bayonet Rings	VI	C
	<b>COUPLING</b>		<b>VISUAL APPARATUS</b>
	· Sealing Surfaces		
	· Valve Discs		
	<b>FACE PIECE TEST</b>		
	· Head Strap Assembly		
	· Mask Body		
	· Sealing Edges/ <b>Surfaces</b>	VI	C
	· Speaking Diaphragm		<b>TEST APPARATUS</b>
	· Lens		
	· Wiper		
	· Defog Mask (Simulate)		

## **BG-4 VISUAL APPARATUS (BREAKDOWN)**

**Back Cover Removed**  
**Hoses – Disassembled**  
**Connector Removed**  
**Inhalation – Exhalation Valves Removed**  
**Cooler and Cooler Cap Removed**  
**Relief Valve (Intact)**  
**Lever Arm**  
**Canister**  
**Springs**  
**Breathing Bag**  
**O2 Bottle**  
**Retainer Clip for Minimum Valve**  
**Minimum Valve**  
**Drain Valve (Intact)**  
**Switchbox (Unlatched but still attached to lines)**

## **BG-4 TOOL KIT**

**7mm – Open End/Box End**  
**8mm – 10mm Combination**  
**10mm – Open End**  
**12mm – 14mm Combination**  
**17mm – 19mm Combination**  
**10mm – 11mm Offset Box**  
**Flat Screwdriver**  
**Phillips Screwdriver**  
**Spanner Wrench**  
**2mm – Allen Wrench**  
**15mm – Open End**  
**Dow-Corning 111**  
**TORX – T-20**  
**Reaction Ring Tool**  
**4mm Slotted Screwdriver**

## **BG-4 Facemask test with RZ-25 Tester or Test-it 6100**

- Fit connecting socket into the connector.
- Moisten test bladder with water.
- Moderately inflate the test bladder and place it into the mask harness.  
(Insure that the test bladder seam is not under the mask sealing surfaces)
- Continue to inflate the test bladder until it fits smoothly and tightly along the face seal of the mask and seal test hose with hose clip.
- Arrange mask straps and retighten them.
- Generate 7 - 10 mbar positive pressure.
- The pressure may not drop by more than 1.0 mbar within 1 minute.
- **Note: If leaks are present use positive pressure and apply leak tec or immerse in water and look for bubbles to find leak.**

(Reference PSS BG-4 Service Manual Pg-37)

## **STATEMENT TO BENCH CONTESTANT**

The bench participant will be provided with two BG-4 apparatus (one disassembled, one assembled), an RZ-25 or Test-It 6100 tester, a stopwatch, defogging solution, leak detector fluid, test kit, and tool kit. Only the tools and fluid provided will be used for testing and assembly of the apparatus. The work at the bench will consist of:

1. A visual examination of a disassembled BG-4 and the proper assembly and preparation for use in rescue work. This will include correcting any predetermined problem(s) so that the apparatus is in proper working order. Simulating defogging of the facepiece lens will be done as a part of the visual examination. This visual examination, correcting predetermined problem(s), and proper assembly can be done at any time allowed for the working of the problem.
2. Test the assembled BG-4 apparatus with a tester, and correct the predetermined problem(s) so that the apparatus is in proper working condition. Except for removing the plug from the coupling on the breathing hoses, the assembled BG-4 apparatus cannot be disassembled to look for problems, until the hoses are attached to the tester, and testing has begun. When testing is completed on the assembled BG-4 apparatus, the hoses shall be removed from the tester, connected to the facepiece, and the back cover installed. This shall be done before the clock is stopped.

When an unplanned deficiency is encountered in the apparatus, the participant will be notified by the judge(s) that the deficiency is not part of the problem. The judge will stop the clock and any time used to correct the deficiency will not be charged to the working time.

A maximum of 30 minutes will be allowed to complete the problem. The judge will tell you when 29 minutes has passed. At the completion of the problem, the judge(s) and the participant will note the working time of the problem with the official timekeeper. Work done after the clock is stopped will not be recognized.