

Tri-State Post 6
BG-4 Contest
June 4, 2013

Visuals

1. **Facepiece**—Top roller buckle on strap backwards.
(* Install correctly roller buckle)
2. **Sentinal**—All three (3) screws loose securing the battery cover.
(Tighten “Snug-up” all three (3) screws)
NOTE: *When setting-up make sure all loose screws are observable.*
3. Extra O’Ring on cooler canister breathing hose connection.
(Remove extra O’Ring)
4. Velcro Strap securing the O2 cylinder installed backwards.
(Install Velcro strap correctly)
NOTE: Do not allow the contestant to removes screws securing down bracket. Have them just twist and pull twist to the other end.
5. Screw loose (not tighten down) securing the O2 cylinder mounting bracket.
(Tighten down screw)
NOTE: Make certain that the loose screw is observable.
6. Both of the adjustable straps on the waist-belt, not laced under the both holder.
(Lace both end of the adjustable straps in both holders)
7. Extra rubber (flat) gasket in drain valve at valve disc seat.
(Remove extra flat rubber gasket)

8. “Old” diaphragm stuck in hole in the refillable canister at the relief valve assembly connection.
(Remove the extraneous material (old diaphragm) from the hole.
9. Small line from switch box to the relief valve assembly hose cut in two at the switch box.
(Remove the small cut line and replace with “longer” good line.)

Tester

1. Hose Coupler—Entire exhalation valve seat & valve disc missing.
(*Install entire exhalation valve assembly
2. Inhalation Hose—Extra valve assembly in the cooling canister connection to hoses.
(*Remove the extra valve assembly)
3. Refillable “Canister”—Hole in **bottom cover** blocked with duct tape
At breathing bag connection.
(*remove blockage from hole)
4. Relief Valve—Teflon gasket between valve disc and valve case.
(*Remove Teflon gasket)
5. Relief Valve Assembly—O’Ring missing on hose coupling
at refillable canister connection.
(*Replace the O’Ring)
6. Drain Valve—Valve disc missing.
(*Install valve disc)

VISUAL APPARATUS CHECKS		HAND TIGHT CONNECTIONS	
✓	Check if ok		Cap on Drain Valve
	FRAME/HARNESS ASSEMBLY		Drain Valve to Breathing Bag
	Switchbox/Sentinel/Sealing Rings/O2 Reg		Minimum Valve to Breathing Bag
	Backcover		Minimum Valve to O2 Supply Line
	BREATHING BAG		Cylinder Connection
	Sealing Surfaces		Regenerative Canister Connections
	Manipulate or Massage (pliability)		Relief Valve to Regenerative Canister
	Minimum Valve & Drain Valve		Cooler to Breathing Bag
	Lever		Distribution Hose
	Springs		Breathing Hoses (Once Testing)
	CYLINDER TEST		Hose Adapter on RZ-25 or Test-It 6100
	Hydrostatic Test Date		TEST APPARATUS
	Cylinder Pressure on Gauge	✓	Check if ok
	Pressure Rating on Cylinder		ZERO ADJUSTMENT ON TESTER
	REGENERATIVE CANISTER		LOW PRESSURE WARNING TEST
	Check for Defects		INHALATION VALVE TEST
	Sealing Surfaces		EXHALATION VALVE TEST
	Expiration Date or Screens/Filler Mats/Seal		DRAIN VALVE TEST
	Seal Strap with Tension Spring Hook		LEAK TEST with POSITIVE PRESSURE
	RELIEF VALVE		RELIEF VALVE TEST
	Check for Defects		State Opening Pressure
	Valve/O-Ring		HIGH PRESSURE LEAK TEST
	COOLER		CONSTANT METERING VALVE TEST
	Check for Defects		State Final Reading
	Sealing Surfaces		MINIMUM VALVE TEST
	HOSES		State Opening Pressure
	Sealing Edges		BYPASS VALVE TEST
	Stretching of Hose for Pliability		LOW PRESSURE WARNING TEST
	COUPLING		State Warning Reading
	Sealing Surfaces		BATTERY TEST
	Valve Discs	V	C
	FACE PIECE TEST		VISUALS
	Head Strap Assembly		roller buckle backwards
	Mask Body		3 battery cover screws loose
	Sealing Edges		extra o'ring cooling canister
	Speaking Diaphragm		velcro strap backwards
	Lens		screw loose cylinder mount
	Wiper		waist belt straps not laced in holders
	Defog Mask (Simulate)		flat gaskets in drain valve
			valve disc in refillable canister hole
			small line at switch box cut in two
			TESTER
			exhalation valve missing
			extra valve assembly in cooling canister
			refillable canister cover hole blocked
			gasket between valve disc relief valve
			o'ring missing relief valve coupling
			valve disc missing drain valve

Tri-State Post 6
Bio-Pak 240-R Contest
June 4, 2013

VISUALS

- 1.) RMS--Battery Door incorrect orientation
***(Identify only)**

- 2.) Mask bezel screw missing (right. Side)
***(Installed screw)**

3. Waist Belt screw loose (left side—top)
***(Tighten screw)**

TESTER

1. Manifold Assembly—missing flow restrictor seal
(high pressure leak)
(* Properly replace seal)

2. Pneumatic Assembly—loose high pressure gauge line fitting---on
regulator side
(High pressure leak)
(* Properly tighten gauge line fitting)

3. Center Section Assembly—hole in flexible diaphragm
(low pressure leak)
(* Replace Flexible Diaphragm)

Post 6 Bio-Pak 240 Contest--June 4, 2013

BIO-PAK-R BENCH CONTESTANT _____ WORKING TIME _____ MIN. _____ SEC.

VISUAL APPARATUS CHECKS			CONNECTIONS		
✓	Check if ok				Vent Valve Assembly - Hand Tight
	UPPER HOUSING				Diaphragm Worm Gear - Wrench Tight
	LOWER HOUSING				Flow Restrictor - Wrench Tight
	· Harness Assembly				Breathing Hose Worm Gear - Wrench Tight
	· External Gage				Add / Constant Fittings – Hand Tight
	· O2 Regulator / Seal				Center Section Lid - Hand Tight
	· RMS				Center Section Push Pins - Hand Tight
	CENTER SECTION ASSEMBLY				Cylinder Connection - Hand Tight
	· Diaphragm				Adapter to Facepiece - Hand Tight
	· O-Ring and Sealing Edges				Test Fixture Connections - Hand Tight
	Demand Valve Assembly				TEST APPARATUS
	Moisture Pads	✓			Check if ok
	PCM				CONSTANT FLOW TEST
	CARBON DIOXIDE SCRUBBER				Flow Between 1.6 and 2.4 Lpm - State Reading
	· Defects / Damage				DEMAND VALVE TEST
	· Gasket				EMERGENCY BYPASS TEST
	· Expiration Date				VENT VALVE TEST
	CENTER SECTION LID ASSEMBLY				At or below 2 inches wg - State Reading
	· Examine for defects / damage				LOW PRESSURE LEAK TEST
	· Check O-Ring for damage / lubrication				RMS GAUGE AND TRIM TEST
	Ice Canisters				Observe lights/gauges +/- 10% - State Reading
	Coolant Lids				HIGH PRESSURE LEAK TEST
	CYLINDER TEST				LOW PRESSURE ALARM TEST
	· Hydrostatic Test Date				Alarm 650-1000 psig – State Reading
	· Cylinder Pressure on Gauge				Power down below 25 psig
	· Pressure Rating on Cylinder	VI	C		<u>VISUAL</u>
	HOSES				*Battery door incorrectly installed
	· Sealing Edges				*Mask—screw missing rt. side
	· Stretching of Hoses for Pliability				*Waist belt screw loose—top left. side
	Adapter Assembly / Gasket				
	FACE PIECE TEST				
	· Head Strap Assembly	VI	C		<u>TESTER</u>
	· Mask Body / Nose Cup				*Manifold—flow restrictor seal missing
	· Sealing Edges				*Loose O2 gauge line fitting
	· Speech Diaphragms				*Hole in flexible diaphragm
	· Lens / Anti-Fog Insert				
	· Defog Mask (Simulate)				