

Models

PAK-4 & PAK-4R, PAK-4TV

Manual No. PAK002

(Rev 8 FEB 2011)



Operating Manual

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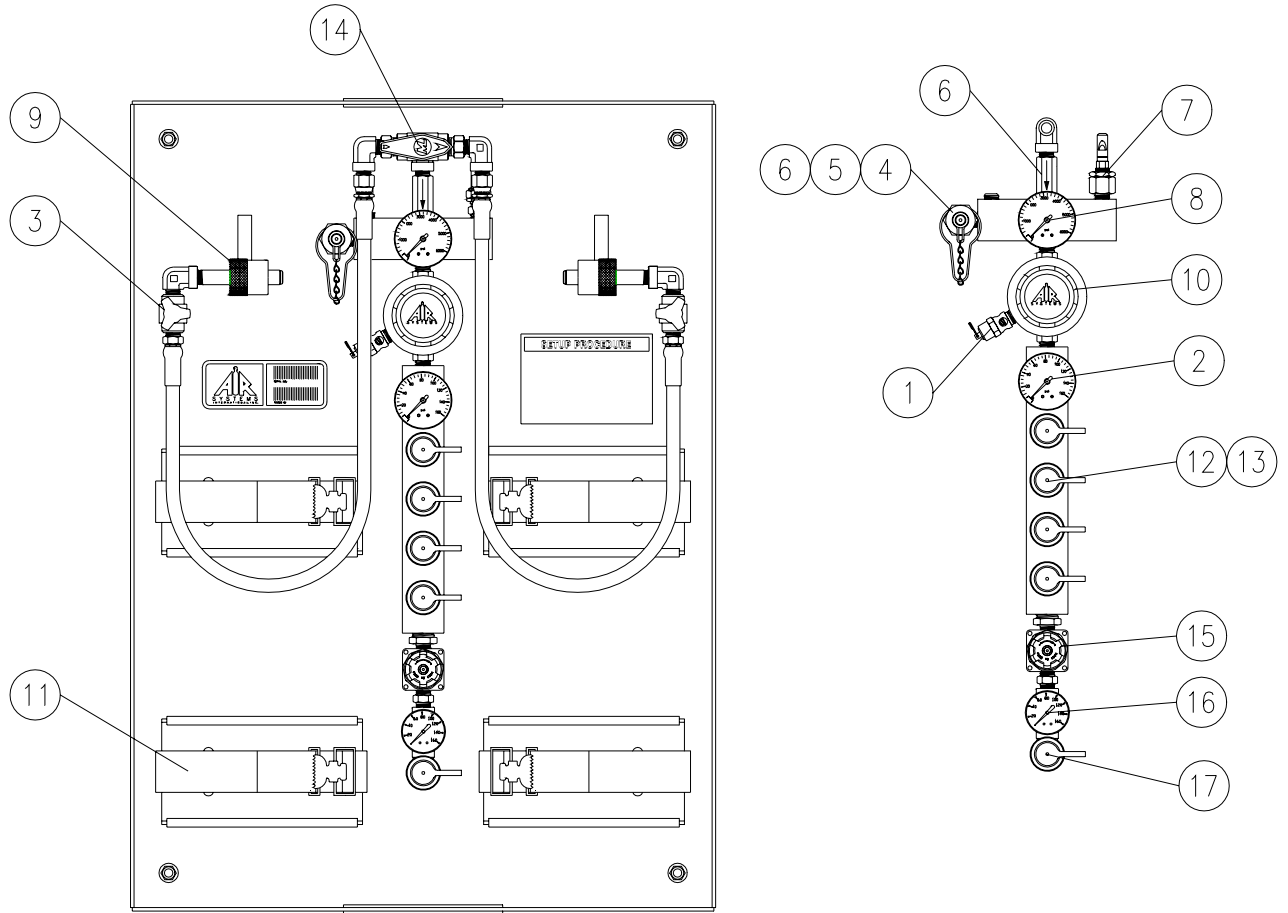
OVERVIEW

The PORTA-PAK series has been designed as a multifunctional rapid response portable bottled air unit. It allows four (4) workers to plug in airline respirators to a portable bottled air distribution system. The system will accommodate most SCBA cylinders, with 2216psi and 4500psi simultaneous capability. Common applications include confined space entry, Hazmat, tactical rescue, emergency response or any other breathing air applications where the size of a cart is of concern for either entry, storage, or portability. The additional low pressure regulator and port permits the use of pneumatic equipment such as saws, chisels and lift bags or an additional respirator.

SPECIFICATIONS

| | |
|---------------------------------------|---|
| PAK-4 Tray Size: | 29.5" L x 21" W x 6.5" D (75cm H x 53cm x 17cm D) |
| Cart Dims: | 26" W x 33" H x 16 1/4" D (66cm W x 84cm H x 41.5cm D) |
| Weight w/o cylinders: | 27 lbs. (12.2 kg) |
| Cart Weight: | 29 lbs. (13.1 kg) |
| Frame: | Aluminum (powder coat painted) |
| Cylinder Straps: | Four (4) adjustable straps to accommodate different size cylinders |
| Whip Assemblies: | Thermo plastic 5000psi (345 bar) rated 4:1 safety factor |
| Bleeder Valves: | Allows depressurization of hand tight nut before cylinder removal |
| Check Valves: | Allows independent cylinder operation and removal without complete system shut down |
| Warning Alarm: | Pneumatic whistle for low pressure warning - set at approximately 500psi (34.5 bar) |
| Primary Regulator Pressure: | 0 - 5500psi (379 bar) inlet 0 - 125psi (8.6 bar) discharge |
| Primary Regulator Flow Rate: | 80cfm (2260 LPM) @ 125psi (8.6 bar) discharge pressure |
| Relief Valve: | 125psi (8.6 bar) ASME preset |
| Air Distribution: | Five (5) regulated quick connect fittings |
| Secondary Regulator Pressure: | 0 - 300psi (20.6 bar) inlet 0 - 125psi (8.6 bar) discharge |
| Secondary Regulator Flow Rate: | 24cfm (678 LPM) @ 65psi (4.5 bar) discharge pressure 5cfm (141 LPM) @ 80psi (5.5 bar) discharge pressure |
| Intrinsically Safe: | No electronic devices |

PARTS IDENTIFICATION



| ITEM # | DESCRIPTION | PART # |
|--------|------------------------------------|-----------|
| 1 | RELIEF VALVE | VR4125BR |
| 2 | REGULATOR OUTLET PRESSURE GAUGE | GA20160B |
| 3 | BLEEDER VALVE | VAL030 |
| 4 | CGA-347 PRESSURE CAP | SS347CAP |
| 5 | CGA-347 MALE ADAPTER | SS4F347AM |
| 6 | CHECK VALVE | VC4MMSS |
| 7 | LOW PRESSURE WHISTLE | AC-PA25 |
| 8 | CYLINDER PRESSURE GAUGE | GA206KB |
| 9 | CGA-347 HANDTIGHT NUT/NIPPLE | SS347HT |
| 10 | PRESSURE REGULATOR | REG-5000 |
| 11 | NYLON CYLINDER STRAP | HDWR113A |
| 12 | HANSEN RESPIRATOR FITTING | QDH3SL6M |
| 12A | SCHRADER RESPIRATOR FITTING | QDSSL6M |
| 13 | HANSEN DUST CAP | QDH3DCAP |
| 13A | SCHRADER DUST CAP | QSDCAP |
| 14 | CYLINDER SELECTOR VALVE | VAL153 |
| 15 | SECONDARY REGULATOR | WL013 |
| 16 | SECONDARY REGULATOR PRESSURE GAUGE | GA15160B |
| 17 | SECONDARY OUTLET FITTING | QDH3SL4M |
| 18 | 8" WHEEL | HDWR100 |
| 19 | HOSE RACK/COVER PIN | HDWR114 |
| 20 | HANDLE/PORTA PAK PIN | HDWR130 |

SETUP PROCEDURE

Step 1)

Install cylinders on PORTA-PAK tray. Secure cylinders by tightening the straps at the buckle, and mate the velcro sections to prevent slipping. 2216psi (153 bar) or 4500psi (310 bar) cylinders can be used.

Step 2)

Install CGA-347 hand tight nuts to the cylinder valves and tighten. Insure both bleeder valves are closed by turning fully clockwise.

Step 3)

Open one cylinder.

Step 4)

Index the selector valve so that it points to the open cylinder. At this time, the low pressure warning alarm will sound until it sets itself at approximately 1000psi (69 bar). Check reading on gauge to verify that it is full. Close the cylinder.

Step 5)

Set the required respirator pressure with the regulator control knob and bleed pressure at either the relief valve or by partially engaging a male plug into one of the respirator couplings. This depressurizes the manifold and simulates low cylinder pressure. The low pressure warning alarm should sound at approximately 500psi (35 bar).

Step 6)

Index the selector valve toward the other cylinder and open. At this time the low pressure warning alarm will resound until it sets itself at approximately 1000psi (69 bar). Check reading on gauge to verify that it is full. When both cylinders are known to be full, reopen the first one tested.

Optional)

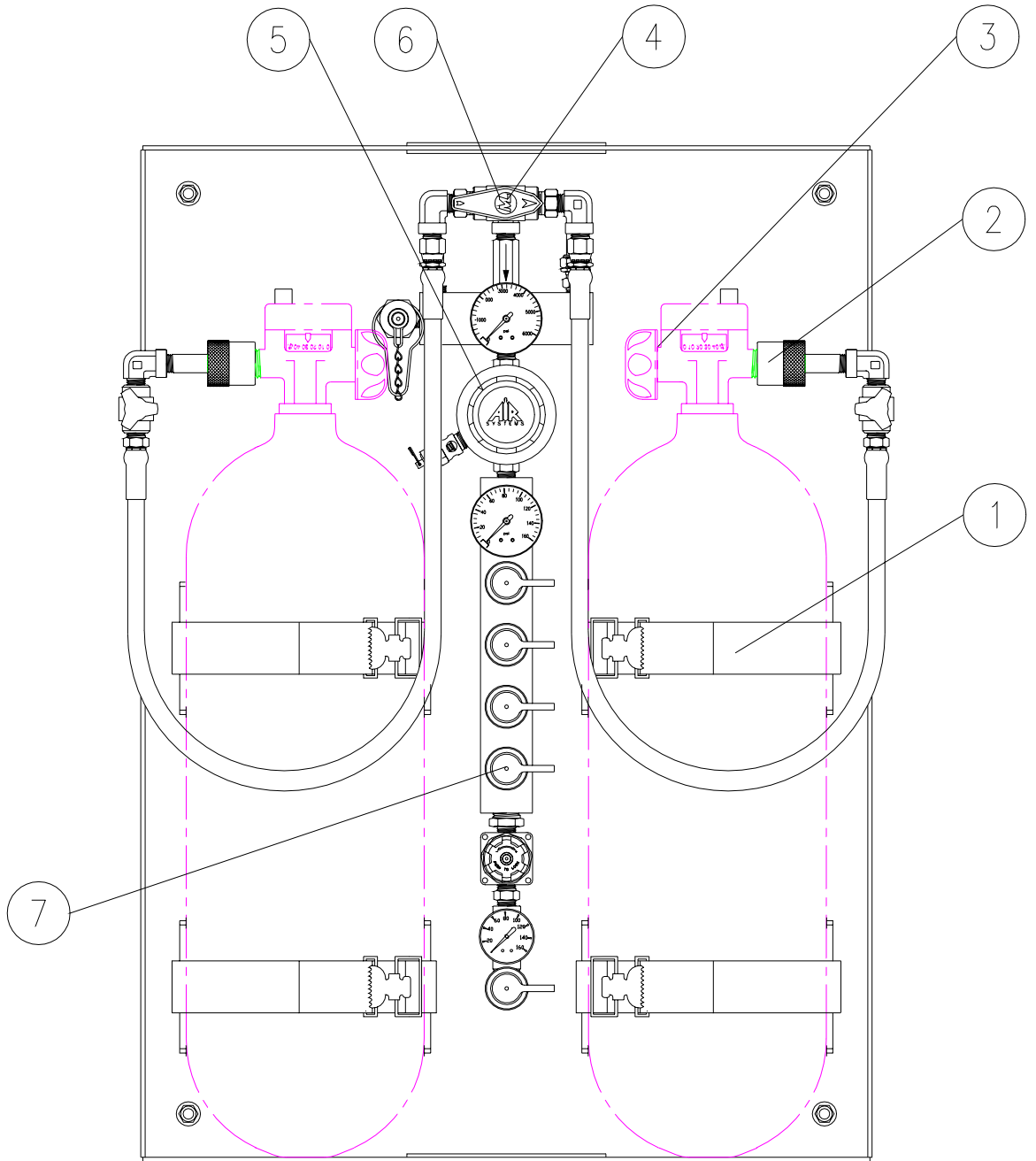
Install high pressure connect whip to auxiliary inlet port (CGA-347). This step can be done after Step 6, or at anytime during operation of the system.

Step 7)

Couple respirators and lengths of hoses to the manifold and readjust pressure regulator if necessary. The system is now operational.

Optional)

If pneumatic equipment is to be used which requires a different pressure than the respirators, set the secondary low pressure regulator accordingly. Locking regulator--push to lock, pull to unlock.



OPERATION

When the cylinder in use has been depleted to approximately 500psi (35 bar), the low pressure warning alarm will sound, indicating that the cylinder needs to be replaced.

To change a cylinder while the PORTA-PAK is still in use:

1. Index the selector valve to the second cylinder, and note the gauge pressure to assure that it is full.
2. Close the drained cylinder and open the corresponding bleeder valve to relieve pressure on the hand tight nut.
3. Install a known full cylinder in its place and connect CGA-347 hand tight nut to cylinder valve. Close the bleeder valve on the connect whip and open the cylinder. It is now ready for use when the other cylinder's pressure descends to 500psi.

SHUTDOWN

Make sure all personnel have egressed the hazardous area, and have disconnected from the breathing air system.

1. Close cylinder valves.
2. Depressurize manifold pressure by pulling the relief valve ring.
3. Open bleeder valves.
4. Close the regulator by turning the control knob counterclockwise.
5. Reinstall dust caps.
6. Remove connections from cylinders. Reinstall cylinder valve covers (if applicable).

HIGH PRESSURE AIRLINE GENERAL MAINTENANCE & INSPECTION

Monthly

1. Check regulators, gauges, and valves for external leakage.
2. Inspect cylinder valves for proper closure.
3. Check cylinder pigtailed for cleanliness, flexibility, wear, leakage, blisters on hose, thread damage, and O-rings on CGA fittings. Replace damaged items immediately.

Annually

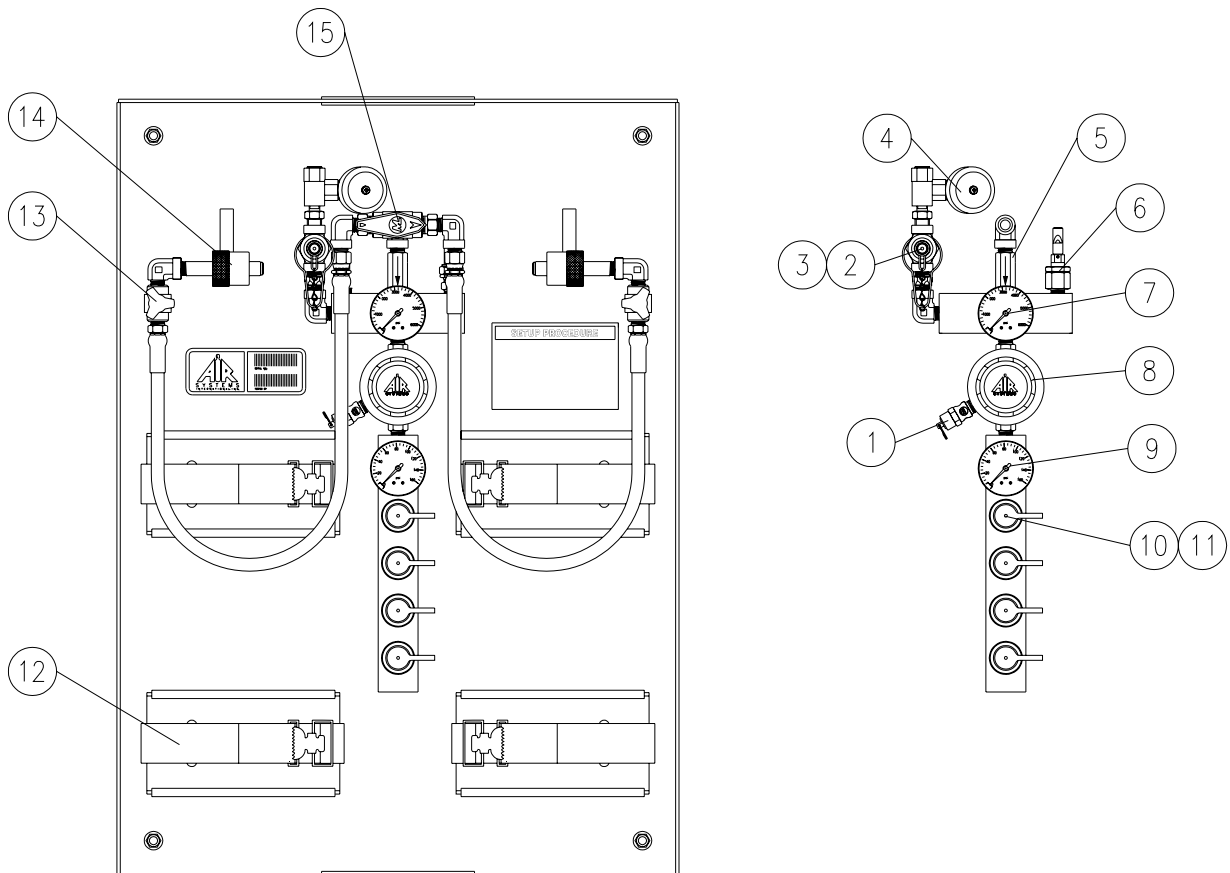
1. Check relief valve's pressure setting.
2. Check regulator function by opening and closing regulator valve fully.

Every 4 years

1. Replace all flexible pigtailed--contact ASI customer service department.

PAK-4TV PARTS IDENTIFICATION

| ITEM # | DESCRIPTION | PART # |
|--------|-----------------------------------|------------|
| 1 | 125 PSI RELIEF VALVE | VR4125BR |
| 2 | AUXILIARY INLET | SS4F347AM |
| 3 | PRESSURE CAP | SS347CAP |
| 4 | AUXILIARY INLET LOW PRESSURE BELL | AC-PA25B |
| 5 | CHECK VALVE | VC4MMSS |
| 6 | LOW PRESSURE WHISTLE | AC-PA25B |
| 7 | CYLINDER PRESSURE GAUGE | GA2075KB |
| 8 | PRESSURE REGULATOR | REG-5000NG |
| 9 | OUTLET PRESSURE GAUGE | GA20160B |
| 10 | HANSEN COUPLING | QDH3SL6M |
| 10A | SCHRADER COUPLING | QDSSL6M |
| 11 | HANSEN DUST CAP | QDH3DCAP |
| 11A | SCHRADER DUST CAP | QDSDCAP |
| 12 | CYLINDER STRAP | HDWR113A |
| 13 | BLEEDER VALVE | VAL030 |
| 14 | CGA-347 HAND-TIGHT NUT/NIPPLE | SS347HT |
| 15 | CYLINDER SELECTOR VALVE | HDWR153 |



Warranty Disclaimer

Air Systems' manufactured equipment is warranted to the original user against defects in workmanship or materials under normal use for one year after date of purchase.

Any part which is determined by Air Systems to be defective in material or workmanship will be, as the exclusive remedy, repaired or replaced at Air Systems' option.

This warranty does not apply to electrical systems or electronic components. Electrical parts are warranted, to the original user, for 90 days from the date of sale. During the warranty period, electrical components will be repaired or replaced at Air Systems' option.

NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER MATTER IS GIVEN BY AIR SYSTEMS IN CONNECTION HEREWITH. UNDER NO CIRCUMSTANCES SHALL THE SELLER BE LIABLE FOR LOSS OF PROFITS, ANY OTHER DIRECT OR INDIRECT COSTS, EXPENSES, LOSSES OR DAMAGES ARISING OUT OF DEFECTS IN, OR FAILURE OF THE PRODUCT OR ANY PART THEREOF.

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