



The Air Source® WORKMATE SERIES

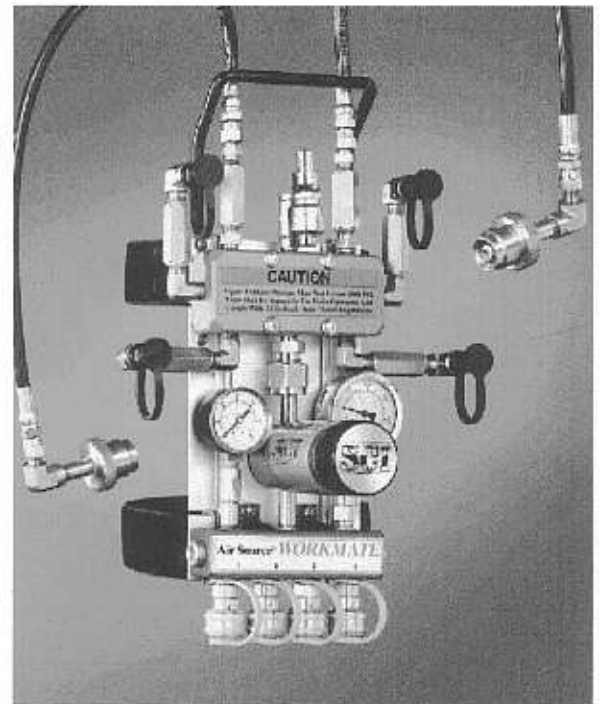
A Multipurpose Air Manifold System

Operating and Maintenance Instruction Manual

THE AIR SOURCE® WORKMATE
Model 200 Series (Model 200 & 200R)

THE AIR SOURCE® WORKMATE
Model 400 Series (Model 400 & 400R)

THE AIR SOURCE® WORKMATE
Model 600 Series



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Workmate Manual
Revised 10/12/05
Edition 2

I would like to dedicate the development of the Air Source® product line to two individuals who became my mentors, teachers, confessors, and best friends. This product is dedicated to Chief James Hughes (March 5, 1940 - August 20, 1990). Jim served as Chief of the Bristol Borough fire fighting forces from 1970 through 1974. Jim's devotion to the volunteer fire service was an inspiration to all of us young officers in the fire service. His logic, fairness, and professional approach to all problems within the fire service molded many young people into exceptional fire officers. Jim is sorely missed by many, but forgotten by none. His untimely death from cancer on August 20, 1990 at the age of 50 shocked and saddened all of us who knew, loved and respected him. The second individual that this product is dedicated to is Chief William Mulholland. Bill dedicated over 30 years of his life to the American Fire Service, and served in just about every capacity in the fire service that one can imagine. As Fire Chief of the Falls Township Fire Company No. 1, Bill supervised all of the fire fighting forces that participated in the K-Mart Distribution Center fire of June 21, 1982. This 1.1 million square foot warehouse fire kept firefighters on location for a week. Bill served on many Bucks County, Pa. fire service committees and boards and assisted in the expansion of all fire related county agencies such as the fire school, communications system, EMS program, and 911 emergency response implementation. Bill also served as a Director in the Eastern Division of the IAFC, and in January 1992 was seated as the President of the Keystone State Fire Chief's Association. Bill also served in many capacities in the Eastern Division of the International Association of Fire Chiefs, ultimately serving as President immediately prior to his death. Bill's undying devotion to the safety and well-being of all firefighters is an inspiration to all of us. Bill's untimely passing on July 3, 1993 will leave a great void in the volunteer fire service community.

"Friendships multiply joys and divide grief's." -- Henry George Bonn (1796-1884)

ABOUT THE INVENTOR OF THE AIRSOURCE® PRODUCT LINE

The Air Source® Product line is designed and built by Joseph M. Nelson, Sr., who serves as the President and Chief Executive Officer of Super Can Industries, Inc. Joe has been a volunteer firefighter for 26 years with the Bristol, Pa. fire service. For 19 of those 26 years, Joe served as Fire Chief of the Bristol Volunteer Fire Co. No. 6, and was the driving force behind the formation of the Dive Rescue Team. In his 26 years as a volunteer firefighter, Joe served in all aspects of fire fighting including engine companies, rescue companies, ladder companies, tactical foam companies, and dive rescue operations. In April of 1991, Joe retired as a Fire Chief to devote his time and energy in designing and marketing new innovative products for the fire service. The Air Source® C.A.R.T. was the first of these endeavors.

SPECIAL ACKNOWLEDGMENTS

I would like to take the time to thank all of my fellow firefighters whose opinions, experience, comments, and suggestions brought the Air Source® C.A.R.T. from a concept into a reality. A special thanks to the dedicated officers and members of the Philadelphia Fire Department's Heavy Rescue 1. These highly motivated, dedicated individuals, under the command of Captain William Schweizer, assisted in every stage of the research and development of the Air Source® C.A.R.T. It is always a pleasure to work with people who are dedicated to their career, and the members of Heavy Rescue 1 exemplify the meaning of the word "professional".

SPECIAL NOTES

The Air Source® C.A.R.T. was designed with every possible safety consideration. From the self-arming alarm system to the personnel locator system, we kept the firefighter and rescuer in mind. Our concerns for the safety and well-being of firefighters and rescuers is due to the fact that we also are firefighters. We have faced the same situations and conditions that you will face in the future. It is our belief that Murphy was an optimist when he wrote, "ANYTHING THAT CAN GO WRONG, WILL". In our experience on difficult operations, we discovered that "EVERYTHING THAT COULD GO WRONG, DID GO WRONG."

Table of Contents

PRODUCT DEDICATION	Page 2
1.0 - INTRODUCTION	Page 4
1.1 - IMPORTANT INFORMATION	Page 4
1.2 - AIR SOURCE® WORKMATE OVERVIEW	Page 5
1.3 - THE CONCEPT OF THE AIR SOURCE® WORKMATE	Page 5
1.4 - WHAT YOU MUST KNOW TO USE THE AIR SOURCE® WORKMATE	Page 5
1.5 - AIR SOURCE® WORKMATE MODELS AND DESCRIPTIONS	Page 6
1.5.1 - The Air Source® Workmate 200	Page 6
1.5.2 - The Air Source® Workmate 200R	Page 6
1.5.3 - The Air Source® Workmate 400	Page 6
1.5.4 - The Air Source® Workmate 400R	Page 7
1.5.5 - The Air Source® Workmate 600	Page 7
1.5.6 - Option Codes and Descriptions	Page 7
1.6 - UNPACKING THE AIR SOURCE® WORKMATE	Page 7
1.7 - SETTING UP THE AIR SOURCE® WORKMATE	Page 8
1.8 - CONNECTING AIR SUPPLY CYLINDERS TO THE WORKMATE UNIT FOR SERVICE	Page 9
1.9 - PROCEDURE FOR CHANGING CYLINDERS DURING OPERATIONS	Page 10
2.0 - USING THE HIGH PRESSURE OUTLET (HPO) ASSEMBLY OPTION	Page 11
2.1 - CARE AND MAINTENANCE OF THE AIR SOURCE® WORKMATE	Page 11
2.2 - MANUFACTURER'S WARRANTY	Page 11
2.3 - TOLL-FREE TECHNICAL SUPPORT HOTLINE	Page 11
3.0 - PARTS KEY NUMBERS PICTURE	Page 12
3.1 - WORKMATE REPLACEMENT PART NUMBERS	Page 13
4.0 - OTHER SCI PRODUCTS	Back Cover

1.0 INTRODUCTION

Super Can Industries, Inc. has designed and manufactured a superior product in the Air Source® Workmate Series. We firmly believe in the design and safety features of the Air Source® Workmate and the benefit that the unit will bring to air line extension breathing operations and remote air supply stations. It is our intent not only to deliver quality products, but also to support and assist our users in all aspects of the Air Source® Workmate's operating and maintenance requirements, so that you may fully understand the product as we do. The Air Source® Workmate is a versatile air supply manifold station that is designed to be portable yet serve as a stationary unit. The Workmate can be used close-up on scene, or be used as a large volume air supply station at a remote site. It can serve as an independent and continuous source of breathing air to pressure demand air line respirators, escape hoods, cooling vests, and with the optional high pressure outlet, be used as a remote air supply station for supplying on-scene portable Cart Systems or refilling S.C.B.A. cylinders.

The Air Source® Workmate can also supply air for pneumatic tools and equipment in large scale disasters and emergencies, provided the air supply needed to operate the pneumatic tools and equipment that operate within the 50 to 150 PSI range.

1.1 IMPORTANT INFORMATION

This Operating and Maintenance Instruction Manual contains important information and must be completely read and understood by all persons who may use or maintain this apparatus.

The Air Source® Workmate should be used or maintained only by trained persons who know and understand the instructions contained within this manual. Warnings, Cautions, and Notes used in this manual have the following significance:

NOTE

Procedures and techniques that are considered important enough to emphasis.

! CAUTION !

Procedures and techniques that could result in damage to the equipment if not properly followed.

!!! WARNING !!!

Procedures and techniques that could lead to serious bodily harm or even death if not properly followed.

!!! WARNING !!!

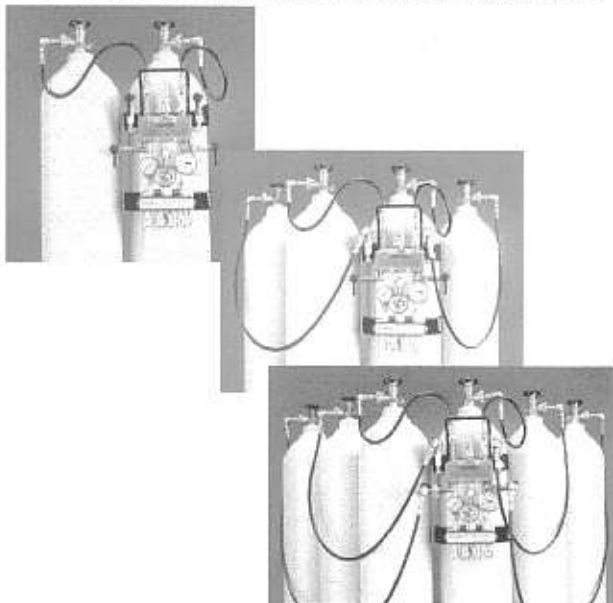
1. Do not use the Air Source® Workmate until the instruction manual has been read and understood.
2. Do not use the Air Source® Workmate to supply breathing air to respirators without a trained and qualified attendant always positioned at the air supply station (Workmate).
3. Do not use the Air Source® Workmate to supply respirators used in IDLH (Immediately Dangerous to Life and Health) atmospheres unless those respirators are equipped with a back up supply (egress cylinder) of sufficient duration for a safe escape in the event of an emergency. An IDLH atmosphere is any atmosphere that poses an immediate hazard to life, and/or produces immediate irreversible debilitating effects on the health of the persons involved.
4. Use of this Air Source® Workmate to supply air to a pressure demand respirator does not convert that respirator into the equivalent of a SCBA (self contained breathing apparatus), or an EEBA (emergency escape breathing apparatus). Pressure demand respirators supplied with breathing air from this air manifold must be also connected to a back-up supply of compressed breathing air carried on the person of the respirator user in order to be used where SCBA or EEBA's are used.
5. In all areas of use, all local, regional, state, and federal guidelines and regulations must be followed regarding the care, use/selection, training, and technical operations for the type of equipment and operation involved.

These brief written instructions cannot substitute for a formal training program. Training should include an opportunity to learn how to inspect, maintain, and operate the Air Source® Workmate.

1.2 AIR SOURCE® WORKMATE OVERVIEW

The Air Source® Workmate Series is multifaceted air manifold station that is portable to meet all the needs that may be encountered in air supply operations in industry and the fire service. It is designed to be supplied from large volume D.O.T. cylinders or from smaller S.C.B.A. cylinders. The supply cylinders may number from two to six and may be removed or placed in-service during operations of the Workmate. The Workmate can supply four low pressure extension air lines from the low pressure manifold with working pressures ranging from 50 to 150 PSI. The Workmate may also supply high pressure air to a remote location to supply on-scene Cart systems with the optional high pressure outlet. Due to the large capacity cylinders that can be incorporated into the system, long duration activities such as maintenance and turnarounds can be supplied quite readily. Regardless of the type of cylinders used to supply the Workmate a low air warning whistle is incorporated into its design so that air supply and status can be monitored.

The Workmate may be attached to a single cylinder laying flat or standing upright and properly secured, with the use of its unique mounting system. Additional cylinders are connected to the high pressure supply side of the Workmate with pre-manufactured high pressure hoses. These hoses are in the proper lengths fitted with CGA 347 couplers for the cylinder ends and high pressure quick-connect snap fittings on the Workmate side of the hose. These high pressure quick-connect snap fittings allow the system to grow or expand by adding additional cylinders into the Workmate even after it has been placed in-service



1.3 THE CONCEPT OF THE AIR SOURCE® WORKMATE

The concept of the Air Source® Workmate came from the design team at Super Can Industries, Inc. due to the vast work experience that these designers have in the industrial and fire services.

Industry requires larger air supply volumes for maintenance and turnaround operations. The fire service requires larger but more cost effective remote air supplies to serve as a back-up storage system for, on-scene portable Carts and refilling of S.C.B.A. cylinders or modular air supply stations, mobile or fixed.

The uniqueness of the Workmate Series is that it is portable to attach to cylinders close to maintenance sites or on-scene emergencies. It has design features that will allow the Workmate to be used as a stationary system within trailers, trucks, vans, service vehicles and fire apparatus. An additional benefit of using the Air Source® Workmate in a vehicle application is that although it has stationary characteristics, it can easily be moved to another vehicle during downtimes of the vehicle it was previously mounted in.

1.4 WHAT YOU MUST KNOW TO USE THE WORKMATE SERIES

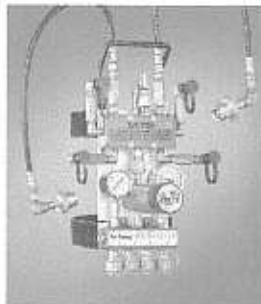
1. The Workmate is in proper working order with fully charged compressed breathing air cylinders.
2. That the breathing air cylinders used are D.O.T. (Department of Transportation) approved and are hydrostatic tested and current, and are not damaged in any way.
3. That the air within the cylinders is CGA (Compressed Gas Association) Grade "D" triple filtered breathing air or better in accordance with N.F.P.A. (National Fire Protection Association) and N.I.O.S.H. (National Institute of Occupational Safety and Health Standards.)
4. That the respirator must have an air supply working pressure of between 50 and 130 PSI.
5. The couplings on the Workmate's low pressure manifold must match the couplers used on the respirator hose assembly and that the hose assembly be the type supplied by the manufacturer of the breathing apparatus.

1.5 AIR SOURCE® WORKMATE MODELS AND DESCRIPTIONS

The Workmates are available in three different configurations designated as the 200 Series, 200R Series, 400 Series, 400R Series and the 600 Series. All models utilize two pre-connected high pressure cylinder supply hoses with CGA 347 couplings for connecting to the first two cylinders to be placed in the system. Series 400, 400R, and 600 have additional checked valved inlets and bleeder Page 6 valves with high pressure quick-connect fittings connected to the high pressure manifold. The hoses for these inlets are supplied in various lengths unattached to the unit. Each high pressure hose has a CGA 347 fitting on one end so the additional cylinders can be connected to the Workmate. On the other end of the high pressure hoses (supplied with the corresponding Workmate Series) a high pressure quick-connect fitting is attached. This will allow the additional cylinders to be added or connected to the Workmate as the Workmate is in-service. Each Workmate has some of the following components incorporated into its design. Pressure bleed valves, a high pressure manifold, high pressure cylinder hoses, quick-connect fittings, high pressure gauge, a self-relieving adjustable pressure regulator, a low pressure manifold, a low pressure gauge, four low pressure outlets with quick disconnect collar lock style connectors, a universal mounting bracket with straps, and a high pressure warning alarm system. All high pressure fittings used in the system are either anodized aluminum, stainless steel, or zinc chromate steel fittings rated for a minimum of 5,000 PSI service.

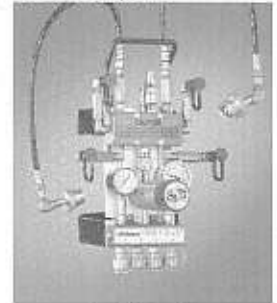
1.5.1 THE AIR SOURCE® WORKMATE 200

The Air Source® Workmate 200 is designed for use with up to two cylinders connected to the two supply hoses. The Workmate unit is connected to one of the cylinders by use of the two Velcro straps on the mounting plate of the Workmate. The Workmate will function with one cylinder attached to the unit since the supply hoses are check-valved to avoid equalization of remaining supply cylinders. Caution should be taken that your air supply is sufficient for your operation



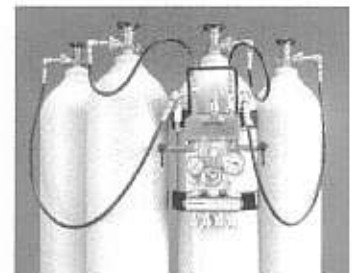
1.5.2 THE AIR SOURCE® WORKMATE 200R

The Air Source® Workmate is designed for use with up to two cylinders connected to the two supply hoses. The Workmate unit is connected to one of the cylinders by use of the two Velcro straps on the mounting plate of the Workmate. In addition, the Workmate 200R has mounted on the high pressure manifold a stainless steel ball valve shutoff. With the use of this valve a high pressure line may be connected from the HPO (high pressure outlet) valve to a remote manifold block or Cart system. This remote airline will supply HIGH PRESSURE air to the remote appliance. The low pressure manifold on the Workmate is still serviceable and its pressure can be adjusted via the adjustable regulator. The Workmate will function with one cylinder attached to the unit since the supply hoses are check-valved to avoid equalization of remaining supply cylinders. Caution should be taken that your air supply is sufficient for your operation.



1.5.3 THE AIR SOURCE® WORKMATE 400

The Air Source® Workmate is designed for use with up to four cylinders. The first two cylinders are connected to the two supply hoses pre-attached to the Workmate 400. The additional two cylinders are connected to the Workmate with the two high pressure supply hoses furnished with the unit. Each additional hose has a CGA 347 fitting for the bottle connection and a quick-disconnect fitting (female) which connects to one of the male quick-connect fittings on the Workmate 400 at the high pressure manifold. The Workmate unit is connected to one of the cylinders by use of the two Velcro straps on the mounting plate of the Workmate. The Workmate will function with one, two, or three cylinders attached to the unit since the supply hoses are check-valved to avoid equalization of remaining supply cylinders. Caution should be taken that your air supply is sufficient for your operation.

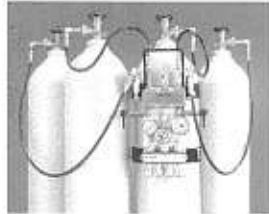


1.5.4 THE AIRSOURCE® WORKMATE 400R

The Air Source® Workmate is designed for use with up to four cylinders. The first two cylinders are connected to the two supply hoses pre-attached to the Workmate 400. The additional two cylinders are connected to the Workmate with the two high pressure supply hoses furnished with the unit. Each additional hose has a CGA 347 fitting for the bottle connection and a quick-disconnect fitting (female) which connects to one of the male quick-connect fittings on the Workmate 400 at the high pressure manifold. The Workmate unit is connected to one of the cylinders by use of the two Velcro straps on the mounting plate of the Workmate. In addition the Workmate 400R has mounted on the high pressure manifold a stainless steel ball valve shutoff. With the use of this valve a high

pressure line may be connected from the HPO (high pressure outlet) valve to a remote manifold block or Cart system. This remote air line will supply HIGH PRESSURE air to the

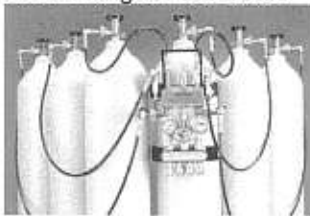
remote appliance. The low pressure manifold on the Workmate is still serviceable and its pressure can be adjusted via the adjustable regulator. The Workmate will function with one, two, or three cylinders attached to the unit since the supply hoses are check-valved to avoid equalization of remaining supply cylinders. Caution should be taken that your air supply is sufficient for your operation.



1.5.5 THE AIR SOURCE® WORKMATE 600

The Air Source® Workmate is designed for use with up to six cylinders. The first two cylinders are connected to the two supply hoses pre-attached to the Workmate 600. The additional four cylinders are connected to the Workmate with the four high pressure supply hoses furnished with the unit. Each additional hose has a CGA 347 fitting for the bottle connection and a quick-disconnect fitting (female) which connects to one of the male quick-connect fittings on the Workmate 600 at the high pressure manifold. The Workmate unit is

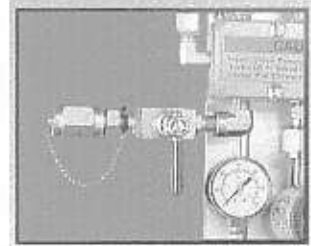
connected to one of the cylinders by use of the two Velcro straps on the mounting plate of the Workmate. The Workmate will function with one, two, three, four or five cylinders attached to the unit since the supply hoses are check-valved to avoid equalization of remaining supply cylinders. Caution should be taken that your air supply is sufficient for your operation.



1.5.6 OPTION CODES

HPO - High Pressure Outlet Option.
(Workmate 200R and 400 R)

With this option, a stainless steel shutoff valve with CGA 346 male connector and stainless steel protective cap are located on the lower left hand side of the high pressure manifold. This option permits the connection of an additional regulator, or a high pressure line to supply a remote appliance, manifold or Cart system with high pressure air.



Low Pressure Manifold Configuration (standard)

The low pressure manifold can be equipped with any available quick disconnect connectors. Please specify the make and type; i.e. Hansen, Aero, Schrader, Foster, or Snap-Tite "H" series are all standard.

Other connector types and styles are available although they may incur an additional cost. This selection of fittings should have been determined and specified when your unit was built. These female low pressure quick-connect fittings must match the male fittings on your air line extension hoses. Also, if your experience an equipment change at a future date, these low pressure quick-connect fittings may be changed at any time to meet your new needs. The low pressure manifold is also equipped with a low pressure air gauge and a safety relief valve.



1.6 UNPACKING THE AIR SOURCE® WORKMATE UNIT

- 1) Remove the unit from the shipping box and remove it from the formed foam cutouts. Note: Save this carton and packing for shipping from plant to plant or for returns to the manufacturer/distributor.
- 2) Remove the bubble wrapping from the ends of the couplings and fittings on the ends of the high pressure supply hoses.

1.7 SETTING UP THE AIR SOURCE® WORKMATE UNIT

After unpacking the Workmate, familiarize yourself with the main components of the unit.

1. THE PNEUMATIC UNIT - This unit is bolted to the main back-plate frame by four stainless steel mounting bolts through the high pressure manifold. This section has many parts, and we will review them individually.

2. HIGH PRESSURE MANIFOLD - This is the main manifold to supply the entire system. All of the pneumatic components mount to this block that will allow air supply cylinders to be connected to the system. The high pressure manifold block is anodized gold color.

3. CHECK VALVES - The check valves are placed in the supply hoses so that the air supply system cannot be equalized as in a cascade system. It allows each cylinder you add into the system to be independent from the other cylinders that you may have in the system. No maintenance is required for the check valves, since they are a closed/sealed fitting.



4. LOW PRESSURE MANIFOLD - The regulator is connected to an aluminum low pressure manifold. The regulated air source comes into this manifold, to be disbursed to the four outlets mounted directly on the manifold. All outlets on the Workmate are designed with a safety lock ring to prevent disconnection of the low pressure hose from the manifold.



Familiarize yourself with the design and operation of the quick disconnects that you have specified or chosen on your Workmate. The manifold is equipped with a 130 PSI relief valve that will relieve excess pressure if the low pressure manifold exceeds 130 PSI. This relief valve is self-resetting, and will do so when the pressure in the low pressure manifold returns to its designed working pressure of less than 125 PSI.

The couplings on the low pressure manifold are fitted with dust caps. These dust caps should remain in place during the times the Workmate is not in-service. They will assist in keeping dirt and debris from entering the couplings. A low pressure air gauge is fitted to the low pressure manifold so that the air pressure being dispersed can be monitored or changed by the adjustable regulator. The low pressure manifold is anodized red.

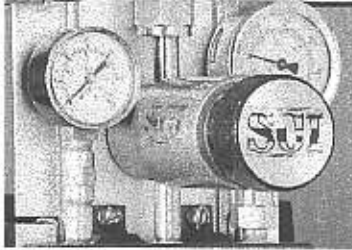
5. BLEED VALVES - These bleed valves are used to vent any remaining pressure from the supply cylinder after the change has been made to the alternate supply cylinder. It allows the operator to shut off the cylinder not being used (at the cylinder valve) and bleed any pressure in the feed supply line. It is important to use the bleed valves when changing cylinders to prevent damage to the "O" ring in the high pressure cylinder connection nipple. After using the Workmate or removing depleted cylinders from the system, shut off the cylinder valve. Next open the bleeder valve in that supply hose. This will bleed the air out of that hose only. Close the bleeder valve and either the cylinder can be disconnected or the quick-connect fitting on the supply hose can be uncoupled at the high pressure manifold. These bleed valves should be kept closed (thumb and finger tight) when the unit is in storage to prevent the hand wheels from vibrating out. These valves have soft seats, and excess pressure should not be used in closing them. Only moderate finger pressure is needed to close these valves. Excessive force will damage the seats.

6. CYLINDER SUPPLY HOSES - These high pressure hoses are connected to the quick-connect high pressure fittings on one end, and the other end has a CGA 347 female hand tight nut and nipple. This connector is designed to attach to either high pressure (4,500 PSI) or low pressure (2,216 PSI) cylinders in 99.9% of all cases. In rare incidents, the SCBA manufacturer has attached a cylinder support to the valve assembly that may interfere with the fit of the nipple. Please check all cylinders that you intend to use to be sure that you can get an airtight fit at this connector. If there is a problem, please contact our office and we will assist you in resolving it. This is a remote and uncommon occurrence. The first two supply hoses are permanently connected to the high pressure manifold on all series of the Workmate. On the Workmate series 400, 400R, and 600 addition supply hoses are supplied so that cylinders 3,4,5 and 6 can be added into the system.

7. SELF-RELIEVING ADJUSTABLE REGULATOR - This regulator is adjustable, increasing pressure in the low pressure manifold as you turn the knob on the regulator clockwise. Depending on the number of outlets in use from the low pressure regulator and the volume of air flowing, the regulator would be set to the appropriate air pressure.

When lowering the air pressure in the regulator (by turning the knob on the regulator counterclockwise), the excess air in the low pressure manifold will be relieved through the adjustable regulator. The setting of the regulator will set the pressure on all four low pressure outlets and that pressure can be read on the low pressure manifold gauge.

8. HIGH PRESSURE GAUGE - The high pressure gauge is located on the high pressure manifold. This gauge indicates the pressure in the high pressure manifold that is being supplied by the air supply cylinders connected to the Workmate, is operational whenever there is pressure in the high pressure manifold.



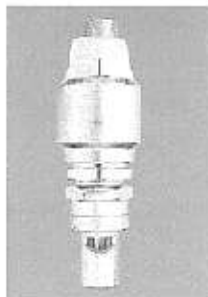
9. LOW PRESSURE GAUGE - The low pressure gauge is located on the low pressure manifold. It is recessed between the high pressure manifold and the low pressure manifold. It indicates the pressure in the low pressure manifold. It is operational whenever there is pressure in the low pressure manifold and will indicate the pressure that the adjustable regulator is set for and delivering to the low pressure outlets.

10. SAFETY RELIEF DEVICE -

The safety relief device is located on the low pressure manifold. It is factory set at approximate 150 PSI and it is a safety device to prevent the accidental over pressurization of the low pressure manifold. It is of the self-seating type, and will close upon the pressure dropping below the set point of the relief valve.

11. HIGH PRESSURE ALARM WHISTLE - Mounted

to the top of the high pressure manifold is a high quality chrome plated brass high pressure whistle. This whistle will monitor the high pressure within the manifold and will sound when the pressure drops to 400 to 500 PSI. The pitch of the whistle will remain consistent from its activation at 400 to 500 PSI to almost a depleted air supply. The high pitch of the whistle is clearly audible by the operator during operations surrounding the Workmate. The whistle alarm system lends itself to the Air Source® Workmate's atmospheric safe design.



12. BACK-PLATE MOUNTING FRAME - The pneumatic unit of the Workmate Series is mounted to a aluminum extrusion that will fit securely against various types of air supply cylinders including S.C.B.A. cylinders. The unit is secured to air supply cylinders by two Velcro straps that are designed to hold the Workmate unit vertically on a air cylinder in the position that you prefer. Rubber anti -slip pads prevent the unit from sliding down the cylinder when properly attached. The back-plate mounting frame of the Workmate is designed to be secured to one cylinder in a group of cylinders that make up the air supply station. The Velcro straps can also be removed from the Back-plate mounting frame and the remaining back-plate aluminum frame can be mounted in a stationary fashion in a trailer, response vehicle, utility service vehicle, etc.

1.8 CONNECTING AIR SUPPLY CYLINDERS TO THE WORKMATE UNIT FOR SERVICE

1.81 Workmate Series 200 / 200R

Open the Velcro retaining straps on the back-plate mounting frame and secure the Workmate onto a supply cylinder. Attach the two supply hoses from the Workmate (center two hoses permanently connected on the Workmate series 200, 200R, 400, 400R and 600) to the supply cylinders by screwing on the CGA 347 hand tight. Tighten moderately with hand tight pressure only. This nipple assembly has a Teflon soft seat that may be deformed or damaged by excessive pressure on the nut assembly. These two supply lines can be bled down and reconnected to new supply cylinders without disrupting operations. Turn on ONE of the air supply cylinders. The high pressure gauge will read the available air supply pressure. Turn the knob on the adjustable regulator clockwise simultaneously reading the low pressure gauge on the low pressure manifold. Set the adjustable regulator to the correct pressure that is required for the appliances that you are using (50 - 150 PSI.) When the open air supply cylinder depletes itself, (approximately 500 PSI), the high pressure warning whistle will sound alerting you of a low air supply condition. *It is important to monitor the high pressure supply gauge for this condition also and not to rely strictly on the warning whistle.* Immediately turn on the second air supply cylinder already connected to the system. This will replenish the air supply to the Workmate. Turn off the depleted cylinder. Bleed off the supply hose by the bleeder valve for the depleted cylinder. Disconnect the CGA 347 supply cylinder coupling. Replace the depleted cylinder with a full air cylinder. Reconnect the CGA 347 coupling. Make sure the bleeder valve is closed and keep the air cylinder in a standby mode as the second cylinder originally was.

! CAUTION !

The Air Source WORKMATE Series utilize a TEFLON® "O" ring on the supply cylinder connectors to facilitate hand tight connections between the unit and the cylinder. Loosening the hand tight nut and nipple assembly while there is pressure in the system will cause damage to or destruction of this "O" ring. Always be sure to shut off the supply cylinder valve and bleed down any residual pressure left in the system prior to disconnecting the cylinder connector.

In the Workmate ® 200R series the high pressure valve connected to the high pressure manifold may be used to supply HIGH PRESSURE air to a remote location or appliance. Simply turn the valve on and the air will be delivered to the remote location via a high pressure airline. This device may be also used as an alternative high pressure inlet if not being utilized as an outlet.

1.82 Workmate Series 400 / 400R & 600

Open the Velcro retaining straps on the back-plate mounting frame and secure the Workmate onto a supply cylinder. Attach the two supply hoses from the Workmate® (center two hoses permanently connected on the Workmate series 200, 200R, 400, 400R and 600) to the supply cylinders by screwing on the CGA 347 hand tight. Tighten moderately with hand tight pressure only. This nipple assembly has a Teflon soft seat that may be deformed or damaged by excessive pressure on the nut assembly. The remaining air supply cylinders may be added into the system at anytime. If they are available when starting, connect the additional two cylinders for the Workmate 400 & 400R or additional four cylinders for the Workmate 600. This can be done by connecting the high pressure quick-connect couplings on the additional supply hoses to the supply inlets on the high pressure manifold. Connect each hose to a air supply cylinders with the CGA 347 couplings. Turn on each air supply cylinder in the supply system except one. Leave this one cylinder off as a back-up supply for larger operations. This back-up supply cylinder must be turned on when all the cylinders supplying the Workmate are depleted and the warning whistle activates or the high pressure supply gauge reads approximately 500 PSI. Once the back-up supply cylinder is turned on (when the other cylinders are depleted) then operations should be terminated or personnel withdrawn from hazardous environments until the air supply cylinders in the system are replenished.

NOTE

All supply cylinders turned on while in operation will deplete equally as air is consumed by the system. When air supply is established to the Workmate the high pressure gauge will read the available air supply pressure. Turn the knob on the adjustable regulator clockwise simultaneously reading the low pressure

pressure gauge on the low pressure manifold. Set the adjustable regulator to the correct pressure that is required for the appliances that you are using (50 - 150 PSI.) When the open air supply cylinders depletes themselves, approximately 500 PSI, the high pressure warning whistle will sound alerting you of a low air supply condition. *It is important to monitor the high pressure supply gauge for this condition also and not to rely strictly on the warning whistle.* Immediately turn on the back up reserve air cylinder standing-by already connected to the system. This will replenish the air supply to the Workmate. Turn off the depleted cylinders. Bleed off the supply hoses by the bleeder valves for the depleted cylinders. Disconnect the CGA 347 supply cylinder coupling. Replace the depleted cylinders with a full air cylinders. Reconnect the CGA 347 couplings. Make sure the bleeder valves are closed and keep an air cylinder in a standby mode as the reserve back up cylinder originally was.

On the Workmate ® 400R series the high pressure valve connected to the high pressure manifold may be used to supply HIGH PRESSURE air to a remote location or appliance simply turn the valve on and the air will be delivered to the remote location via a high pressure airline.

1.9 PROCEDURE FOR CHANGING CYLINDERS DURING OPERATIONS

NOTE: The two permanent hose are equipped with bleed valves and may be bled down, disconnected, and reattached to full cylinders without interrupting the operation.

- 1) The tender should monitor the high pressure air supply gauge the entire time that the Workmate is in service.
- 2) If the pressure decreases to the point that the low pressure alarm sounds, you must open the valve on the reserve back-up air supply cylinder that you designated as a standby cylinder.
- 3) Turn off the remaining air supply cylinder valves.
- 4) Open the bleeder valves on the high pressure manifold for the supply hoses corresponding to the depleted cylinders. Close the bleeder valves after the supply lines are bleed off.
- 5) Remove the CGA 347 cylinder couplings to the depleted air supply cylinders.
- 6) Replace the depleted air supply cylinders with full air supply cylinders.
- 7) Turn on *all but one* of the replenished air supply cylinders. The air supply cylinder that you left closed at the cylinder valve will now be your reserve back-up air supply cylinder.