

USER'S MANUAL
For
CONTINUOUS FLOW, LOOSE FITTING
SUPPLIED AIR SHIELD RESPIRATORS

P/N 9903-D
P/N 9903-CV
P/N 9903-C
P/N 9903-HC
(TC# 19C-468)



Read and understand all instructions before using this product. Open carton carefully and inspect product for damage caused by carrier. If any damage is found, report and submit claim to carrier.

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INTRODUCTION

This manual provides instructions for the use and maintenance of the ALLEGRO INDUSTRIES Continuous-Flow Loose Fitting Supplied Air Shield Respirator. You must read and understand this manual and be trained in the proper use of the equipment before using it in a contaminated atmosphere.

FOR MORE INFORMATION ON ALLEGRO INDUSTRIES' PRODUCTS, OR PARTS CATALOG, CONTACT ALLEGRO INDUSTRIES TECHNICAL SERVICE TOLL FREE AT (800) 622-3530 or techsvc@allegrosafety.com.

DESCRIPTION

The ALLEGRO INDUSTRIES Continuous-Flow Loose Fitting Supplied Air Shield Respirator provides a constant flow of air to the Air Shield Respirator when connected to an external air source. When used with an approved air line at a pressure of 10-120 PSI air is delivered to the Air Shield Respirator assembly at a rate exceeding 6 CFM (170 liters per minute) (See NIOSH approval label).

SAFETY PRECAUTIONS

To protect your life and health and prevent serious injury or death, this Shield Respirator must be selected for your application; that it fits properly; that it is used, inspected and maintained as directed in this manual.

Industrial Hygienists, Safety Engineers, Occupational Physicians, Medical Department or Supervisor are among those professionals who should be consulted to ensure that you are wearing the proper Face Shield for the protection needed.

Read, Understand and follow the Warnings-Limitations listed below:

WARNINGS – LIMITATIONS

1. Do not use this Air Shield Respirator in any way that does not agree with this Users Manual or any applicable regulation.
2. This Air Shield Respirator must be used in accordance with a complete Air Shield Respirator program, such as the one specified in 29 CFR 1910.134.
3. Do not use this Air Shield Respirator in enclosed or poorly ventilated spaces where a high concentration of contaminants can occur or in an oxygen deficient atmosphere. Use only in adequately ventilated areas containing sufficient oxygen to support life.
4. This Air Shield Respirator does not supply oxygen. Use only in atmospheres containing no less than 19.5% oxygen.
5. Do not use this Air Shield Respirator in any atmosphere that is immediately dangerous to life or health. Such atmospheres contain contaminants that pose an immediate threat of severe exposure, or which are likely to have an adverse delayed effect on life or health.

6. The exposure limits specified in OSHA regulations, other government relevant regulations, and in the authoritative scientific literature shall be observed when the Air Shield Respirator described in this manual is used.
7. This Air Shield Respirator shall not be used in any manner contrary to the recommendations contained on the package label and/or the Material Safety Data Sheet (MSDS) or similar documents available from the manufacturer or supplier of the substance or substances being used.
8. **Do not use this Air Shield Respirator during abrasive blasting (including sandblasting).**
9. Use only ALLEGRO INDUSTRIES component parts and combinations of parts to assemble or repair this Air Shield Respirator. Consult the parts list and approval label for approved parts. Use of non-approved parts voids the NIOSH approval and may result in bodily injury or death.
10. This Air Shield Respirator should be inspected and any necessary repairs made before each use. It must be cleaned, sanitized, dried and stored according to the directions in this manual.
11. Do not use this Air Shield Respirator if you have a concern that the air being supplied to the Air Shield Respirator is not of the quality and quantity described herein.
12. Never alter or modify the Air Shield Respirator. In making any repairs, use only those parts recommended by the manufacturer.
13. This Air Shield Respirator must not be used for protection in atmospheres which contain air contaminants that may penetrate, irritate or injure the skin, unless suitable additional protective equipment is used.

CAUTIONS AND LIMITATIONS LOCATED ON THE NIOSH APPROVAL LABEL

- A - Not for use in atmospheres containing less than 19.5 percent oxygen.
- B - Not for use in atmospheres immediately dangerous life or health.
- C - Do not exceed maximum use concentrations established by regulatory standards.
- D - Airline respirators can be used only when the respirators are supplied with respirable air meeting the requirements of CGA G-7.1 Grade D or higher quality.
- E - Use only the pressure ranges and hose lengths specified in the instruction manual.
- J - Failure to properly use and maintain this product could result in injury or death.
- M - All approved respirators shall be selected, fitted, used and maintained in accordance with MSHA, OSHA and other applicable regulations.
- N - Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
- O - Refer to Users Instructions and/or maintenance manuals for information on use and maintenance of these respirators.
- S - Special or critical User's Instructions and/or specific use limitations apply. Refer to User's Instructions before donning.

Warning:

ALLEGRO INDUSTRIES air hose is approved for use with this Supplied Air Shield Respirator. Using any other hose will automatically void the approval of the Air Shield Respirator and may be hazardous to the wearer.

SPECIAL OR CRITICAL USERS INSTRUCTIONS

Hose Length to Pressure

Not for use in atmospheres containing less than 19.5 percent oxygen. Approved for use with respirable air meeting the requirements of the Compressed Gas Association specifications G-7.1, for type 1, Grade D air, through no more than three (3) lengths of approved hose as specified in the following chart (on the next page).

Flow Controller/Hose Length to PSI Range

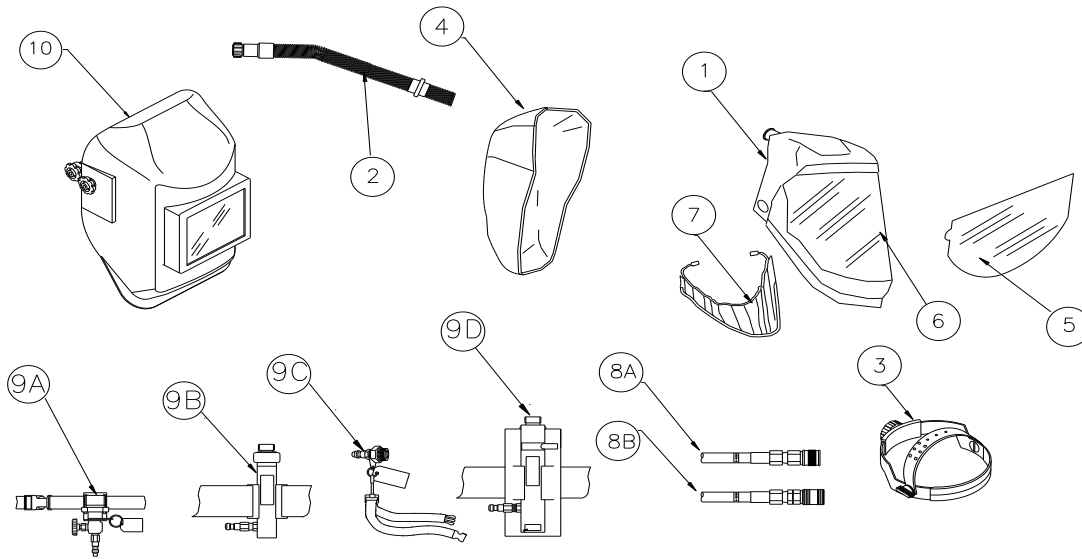
Hose Length/Ft.	9903-D	9903-CV	9903-C	9903-HC
	9100 Series L.P. Hose	9101 Series H.P. Hose	9101 Series H.P. Hose	9101 Series H.P. Hose
	L.P. Flow Adapter P/N 9910-11	Flow Control Valve P/N 9992	Personal Air Cooler P/N 9991	Heater/Cooler P/N 9990
25	10 – 14	25 – 30	72 – 76	90 - 100
50	15 - 20	28 – 33	75 – 79	95 - 105
75	17 – 24	30 – 36	78 – 82	105 - 115
100	21 – 26	32 – 38	79 – 83	105 – 115
150	25 - 32	34 – 40	81 – 86	110 – 120
200	28 – 36	37 – 42	82 – 90	110 – 120
250	32 – 40	39 – 44	83 – 94	115 – 120
300	35 - 43	41 - 46	86 - 98	115 - 120

Parts List

<u>Item No.</u>	<u>Part Number</u>	<u>Description</u>
1	9903-09	Air Shield Respirator Assembly, Economy
2	9903-01A	H.P. Breathing Tube Assembly
3	9903-03	Ratchet Suspension Assembly, Economy Shield
4	9903-04	Head Cover
5	9903-25A	Peel Off Lens
6	9903-09L	Lens, Economy Air Shield Respirator Assembly
7	9903-05	Chin Guard
8A	9100-25	25' SAR Hose, 1/4" Rectus Couplers
8A	9100-50	50' SAR Hose, 1/4" Rectus Couplers
8A	9100-100	100' SAR Hose, 1/4" Rectus Couplers
8B	9101-25B	25' SAR Hose, 1/4" Hansen Couplers
8B	9101-50B	50' SAR Hose, 1/4" Hansen Couplers
8B	9101-100B	100' SAR Hose, 1/4" Hansen Couplers
9A	9992	Adjustable Flow Control Valve
9B	9991	Personal Air Cooler
9C	9910-11	Low Pressure Flow Adapter
9D	9990	Heater/Cooler
10	9903-20	Welding Helmet (Accessory)

Note: Refer to Allegro Parts Book for individual parts availability

Parts



AIR QUALITY AND VOLUME

The responsibility of maintaining the quality of the air supply is yours. The air breathed by the person wearing a Supplied Air Shield Respirator must be of a proper quality and quantity (sufficient volume or flow rate) to satisfy all the Air Shield Respirator needs of the wearer and to prevent any contaminated air from entering under the face seal.

Government standards require that the air supplied to the Air Shield Respirator contain at least 19.5% oxygen by volume. Unless safety and health codes in your area specify otherwise, the quality of the air must meet the applicable minimum grade requirements for Type 1 gaseous air set forth in the Compressed Gas Association Commodity Specification for Air, CGA G7.1 (Grade D or higher quality).

The air taken into a compressor for ultimate use in a Supplied Air Shield Respirator must meet this standard before and after compression. Use of low pressure, oil-less ambient air pumps, which must be located in a contaminant-free area in order to deliver air to the Respirator.

INLET AIR PRESSURE

To assure that the quantity (flow rate) of compressed breathing air into a Supplied Air Shield Respirator, while it is being worn is within the prescribed limits, it is necessary to consider the pressure of the air supplied at the point of attachment, and the length of the supplied air hose. (See Flow Controller/Hose Length to PSI Range Table for appropriate air hose length to PSI range.)

PUTTING ON (DONNING) THE AIR SHIELD RESPIRATOR

When properly worn, this Loose Fitting Respirator is attached to the wearer at two points. One is by the headband ratchet assembly; the other is the breathing tube, which extends from the back of the Respirator and connects to the air-hose adapter(s) secured around the waist.

The assembled Air Shield Respirator should be put on (donned) in uncontaminated air, as follows:

1. Check the Air Shield Respirator fit by opening head band adjustment knob, then placing Shield over the top of head, check center band adjustment so that the front (padded) strap fits on the forehead and not over the eyebrows/eyes. Adjust the height of suspension strap by “unplugging” the pin, slide the strap in for smaller height (or out for more height), snap the pin into associated hole. Check for proper height and adjust accordingly. Place the Shield on head and adjust the size of headband to fit around head by turning adjustment knob.
2. Check Air Shield Respirator Lens for clarity, checking for smudges, dust, and other particles that may impair vision. Place, or re-place Lens Peel-off, if required. A Lens Peel-off is recommended to protect clarity and extend the useful life of the Visor Shield
3. Attach Flow Controller belt around waist, adjust and secure.
4. Donn the Respirator on head in the “up” position. Connect the Down Tube Swivel Nut to the Flow Controller.
5. Connect the approved supplied air hose to the quick connect plug on the Flow Controller.
6. Once connected to the air hose, turn on the ambient air pump (Low Pressure) or set the air line regulator at the point of attachment (High Pressure) to its required pressure.
(See Flow Controller/Hose Length to PSI Range Table for appropriate air hose length to PSI range.)
 - High Pressure Flow Controllers
 - 9991 Personal Air Controller, turn the adjustment knob on the bottom of the cooler.
 - 9992 Flow Control Valve, increase or decrease the amount of air desired into the face mask by turning the adjustment knob on top of the controller.
 - 9990 Heater/Cooler is adjustable by moving the control lever from the Cool to Warm position as required.
7. Lower the Shield, adjust Chin Guard (soft white cloth) under chin, and position Head Cover (black cloth on the back of the shield) over neck onto shoulders. Verify air flow, adjust to appropriate volume, and then enter work environment.

REMOVAL OF (DOFFING) THE AIR SHIELD RESPIRATOR

1. Exit from the work/ hazardous area.
2. Lift visor, and associated chin guard, to the “up” position.
3. Disconnect the respirator from the supplied air line hose coupler. **(Note: When using an ambient air pump, always turn the pump off first prior to disconnecting the Air Shield Respirator from the supplied air line coupler. Failure to follow this procedure will cause damage to pump).**
4. Unbuckle and remove the waist belt, remove Air Shield Respirator, clean, and store in an appropriate location, Make sure that the Air Shield Respirator is placed to avoid damage or scratching to the visor.

MAINTENANCE

INSPECTION

The Air Shield Respirator and its components used by an individual should be, inspected and if possible cleaned and sanitized after each day of use. Replace scratched lens when vision is obstructed or impaired.

CLEANING

Air Shield Respirators used by more than one worker should be cleaned and sanitized after each day of use. Allegro Industries recommends that the Air Shield Respirator be cleaned after each use. **Do not use solvents to clean the Respirator or lens, doing so could damage the lens and affect the integrity of the mask.** Allegro recommends using P/N 0350 Lens Cleaning Wipe for cleaning the Air Shield Respirator lens and Lens Protector.

It may be necessary to partially disassemble the Air Shield Respirator assembly to clean it thoroughly. Follow the steps listed below.

1. If the Chin Guard is heavily soiled and can only be adequately cleaned when removed. Pull apart the Velcro® connections at the top and back part of visor and along the edges of the visor. It may be removed, washed, and air dried separately. Clean with any mild soap or detergent. The water temperature must not exceed 110°F. Do not use harsh alkali or acidic cleaners. A soft brush or cloth can be used to facilitate cleaning.
2. Rinse the Air Shield Respirator assembly thoroughly to remove any soap or detergent residue that could cause streaking or impaired vision through the Lens.
3. The Air Shield Respirator can be air dried or forced air dried so long as the air temperature does not exceed 110°F.

STORAGE

Before storing, inspect, repair, clean, and dry. Only when clean, dry, and fully operational should the Air Shield Respirator be stored. All Air Shield Respirator products must be stored away from the contaminated atmosphere, clean, and ready-to-use in their original packaging. The Air Shield Respirator should be stored away from dust, sunlight, temperature extremes, moisture, and chemicals. Care must be taken not to deform the Air Shield Respirator during storage. **Do not store**

Air Shield Respirator in direct sunlight, high temperatures, high humidity, or in any contaminated area. It is vital that Air Shield Respirator equipment be stored in clean, dry areas so that it functions properly.

REPAIR

Replacement parts are limited to those components listed on the NIOSH label in this manual and Allegro Industries Parts Catalog.

SPECIFICATIONS

Weight:	Complete Assembly	1.1 lbs.
Material:	Mask Assembly	Nylon, Plastic, and Polycarbonate
	Breathing Tube Waist Belt	Vinyl Hose and Nylon Webbing
	Personal Air Cooler	Aluminum/Stainless Steel
	Adjustable Flow Control Valve	Brass/Plastic
	L.P. Flow Controller	Brass/Plastic
	Heater/Cooler	Aluminum/Stainless Steel

Air Consumption:

9903-D	L.P. Flow Controller	6- 11 CFM @ 10 - 43 PSI
9903-CV	Adjustable Flow Control Valve	6 -11 CFM @ 25 - 46 PSI
9903-C	Personal Air Cooler	6 -11 CFM @ 72 - 98 PSI
9903-HC	Heater/Cooler	6 -11 CFM @ 90-120 PSI

ALLEGRO INDUSTRIES LIMITED WARRANTY AND WARRANTY SERVICE AND RETURN POLICY

Express Warranty

The warranty obligations of Allegro Industries (“Allegro”) are limited to the terms set forth below:

All products, equipment and parts (collectively “Product” or “Products”) sold by Allegro, either directly to its customers, or indirectly from its suppliers or distributors to their customers, are warranted, to the original end-user purchaser who/that receives the original, unaltered Product (“Purchaser”), to be free from defects in workmanship and materials under normal use for one (1) year from the date of sale to the Purchaser, when installed properly and used normally and in accordance with written operation instructions, if any (“Limited Warranty”) (“Warranty Period”). No other express or implied warranty is given, and no affirmation of Allegro, by words or action, will constitute a warranty.

This Limited Warranty is conditioned upon proper use of the Product by Purchaser and applies only to Products manufactured by or for Allegro that can be identified by the Allegro trademark, trade name or logo affixed to them. This Limited Warranty does not apply to or cover: (a) defects or damage caused by or resulting from external causes including, but not limited to, accident, carrier handling, improper packaging in shipment; abuse, misuse, neglect, unusual physical stress, cosmetic damage, flood, fire, earthquake or other natural disasters; (b) normal wear and tear; (c) any

modification of any part of the Product; (d) damage caused by using the Product outside the permitted or intended uses described by Allegro or written instructions; (e) malfunctions resulting from the use of the Product in conjunction with accessories, products or ancillary/peripheral equipment not furnished or approved by Allegro; (f) defects or damage caused by improper testing, operation, maintenance, installation or adjustment; or (g) defects or damage caused by installation and/or service performed by anyone who is not authorized by Allegro.

Each Purchaser agrees and acknowledges that the use, installation and/or operation of the Products shall be at Purchaser's own risk and may result in severe injury, death and/or damage to persons or real and/or personal property.

No Allegro supplier, distributor, officer, agent or employee is authorized to make any modification, extension, change or amendment to this Limited Warranty without the express prior written consent and authorization by the President of Allegro.

Allegro reserves the right to make improvements or changes to its Products at any time, without incurring any obligation to Purchasers, suppliers, distributors or customers who/that previously purchased Products directly or indirectly from Allegro.

EXCEPT AS SET FORTH IN THE EXPRESS WARRANTY CONTAINED HEREIN, PURCHASER TAKES THE PRODUCT "AS IS." THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS BEYOND THOSE STATED IN THIS LIMITED WARRANTY STATEMENT. ALLEGRO DISCLAIMS ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE WARRANTY OF MERCHANTABILITY OF THE PRODUCTS AND THEIR FITNESS FOR ANY PARTICULAR PURPOSE.

NOTHING CONTAINED IN ANY WRITTEN INSTRUCTIONS OR WRITTEN INSTRUCTION OR OPERATION MANUAL OR CATALOG SHALL BE CONSTRUED TO CREATE A WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THE PRODUCT.

IN ADDITION, TO THE FULLEST EXTENT PERMISSIBLE BY APPLICABLE LAW, ALLEGRO SHALL NOT BE LIABLE FOR ANY INJURY OR DAMAGE TO PERSONS OR PROPERTY OF ANY KIND, OR FROM ANY LOSS OF TIME, INCONVENIENCE, OR LOSS OF USE, INCLUDING ANY CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES ARISING DIRECTLY OR INDIRECTLY OUT OF OR IN CONNECTION WITH THE USE, INSTALLATION AND/OR PERFORMANCE OF THE PRODUCT OR PRODUCTS, WHETHER SUFFERED BY SUPPLIER, DISTRIBUTOR, CUSTOMER, PURCHASER OR ANY OTHER PARTY, AND REGARDLESS OF THE LEGAL THEORY UPON WHICH THE CLAIM IS BASED, EVEN IF ALLEGRO HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. WITHOUT OTHERWISE LIMITING THE FOREGOING, IN NO EVENT SHALL RECOVERY OF ANY KIND AGAINST ALLEGRO BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE PRODUCT. THIS WARRANTY GIVES YOU LIMITED SPECIFIC LEGAL RIGHTS.

Warranty Service and Return Policy during Warranty Period

The following requirements must be followed before returning any Product or Products to Allegro:

1. All Purchasers must obtain a Return Merchandise Authorization Number ("RMA#") before returning any Product to Allegro. Allegro will refuse to accept any Product returned that does not have the RMA# clearly marked on the outside of the package or box. The Purchaser may obtain this RMA# by telephoning Allegro's Customer Service number at (800) 622-3530, or by requesting it in writing by mailing the written request to Allegro Industries, 1360 Shiloh Church Road, Piedmont, South Carolina 29673, or by faxing the written request to Allegro Industries at (800) 362-7231.

2. Upon Allegro's issuance of RMA # to a Purchaser, the Purchaser must decontaminate and clean the Product to remove any hazardous materials which may have settled on the Product during use. Allegro reserves its rights to refuse, and will refuse, to accept any Product suspected of being contaminated and/or containing any dangerous chemical(s) or material(s), and will return that Product or those Products to the Purchaser, freight collect.

3. All Purchasers must return the Product or Products to Allegro freight prepaid, with the RMA# clearly marked on the outside of the box or package. Each Product to be returned should be packaged in its original Product packaging materials or equivalent, and be well padded, to prevent damage when in transit, and should be adequately insured by Purchaser. All Purchasers must bear the risk of loss of the Product during transit from Purchaser to Allegro. Inside the Product's package, please enclose your name, address, and telephone number, a description of the problem and a model and/or serial number for each Product returned.

Upon Allegro's receipt of a returned Product from a Purchaser that meets the above requirements, Allegro will determine in its sole discretion whether the Product is defective. If Allegro determines that the Product is not defective and/or does not meet the terms of this Limited Warranty, Allegro will return the Product to the Purchaser freight collect. If Allegro determines that the Product is defective, Allegro will determine in its sole discretion whether to repair or replace the defective Product covered by this Limited Warranty.

Each Purchaser's sole and exclusive remedy for defects in Products covered by this Limited Warranty is limited to Allegro's correction of the defect by repair or replacement.

4. Authorized returns of saleable merchandise, other than shipments made in error by Allegro, will be subject to a 20% restocking charge.

Warranty Terms

This Limited Warranty represents the complete and exclusive agreement covering this subject matter between Allegro and Purchaser and supersedes any prior agreements and/or communications regarding the subject matter hereof. The terms of this Limited Warranty shall be governed and construed in accordance with the laws of the State of California, without regard to any conflict of law principle that would result in the laws of any other jurisdiction governing this Limited Warranty. Any action or proceeding arising out of this Limited Warranty shall be litigated in the California Superior Court located in Orange County, California. Each Purchaser purchasing any Product from Allegro, directly or indirectly, shall be deemed to consent and submit to the jurisdiction of the state court located in Orange County, California. If any term or provision contained in this Limited Warranty is determined to be unenforceable in any respect, the enforceability of the term or provision in any other respect and of the remaining terms and provisions of this Limited Warranty shall not be impaired. This Limited Warranty shall not extend to anyone other than the original Purchaser of the Product(s) and shall be Purchaser's exclusive remedy. Each Purchaser acknowledges that this Limited Warranty will always be construed to be limited by its terms to the greatest extent as the law permits.

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APPROVAL LABEL LOCATION
Insert Approval Label