

3M Supplied Air Hose (Low Pressure) and Fittings

User Instructions for 3M™ Supplied Air Hose W-3020.



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GENERAL SAFETY INFORMATION

Important

Before use, the wearer must read and understand these *User Instructions*. Keep these user instructions for reference.

Intended Use

3M Supplied Air Respirators are designed to deliver clean breathing air to the worker. The 3M™ Low Pressure Supplied Air Hose delivers air from low-pressure pumps. The employer must ensure that the breathing air meets appropriate quality standards. In the United States, breathing air must be at least Grade D breathing air as described in the Compressed Gas Association Commodity Specification G-7.1-1997; in Canada, refer to Canadian Standards Association (CSA) standard Z180.1. This clean air can be delivered to hoods, helmets, full facepieces, half facepieces and loose-fitting facepieces by using the hose and fittings in these *User Instructions*.

NIOSH CAUTIONS AND LIMITATIONS

Supplied air hoses are one part of a NIOSH approved system. Refer to the User Instructions provided with the approved air control devices for the listing of the appropriate Cautions and Limitations.

NIOSH Approvals

The airline fittings described in these user instructions are NIOSH approved for use with the 3M™ Low Pressure Supplied Air Hose. The hose and fittings are components of NIOSH approved 3M™ Supplied Air Respirator Systems. See the NIOSH approval label included with the 3M air control device to determine which 3M™ Supplied Air Respirator Systems are NIOSH approved.

Product Number	AAD Number ¹	Description
W-3020-25	07033	Supplied Air Hose, Industrial Interchange Fittings, 25 ft, ½ in. ID
W-3020-50	07034	Supplied Air Hose, Industrial Interchange Fittings, 50 ft, ½ in. ID
W-3020-100	07035	Supplied Air Hose, Industrial Interchange Fittings, 100 ft, ½ in. ID

1. 3M Automotive Aftermarket Division (AAD). AAD part numbers are catalog numbers only. NIOSH approved by OH&ESD product number.

Combining 3M™ Low Pressure Compressed Air Hoses is Not Permitted

The W-3020-25, W-3020-50, and W-3020-100 hoses can only be used in single lengths of 25, 50 or 100 feet (7.62, 15.24 or 30.48 meters). No multiple connections of these hoses are allowed.

Caution:

To avoid the risk of reduced airflow to the respirator system, do not combine 3M hoses where connections are not allowed.

Use Limitations

WARNING

- You must comply with Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.134, which states that “Airline couplings shall be incompatible with outlets for other gas systems to prevent inadvertent servicing of airline respirators with nonrespirable gases or oxygen.” In Canada, refer to the requirements of CSA standard CSA Z180.1. **Failure to do so may result in sickness or death.**
- Your employer must provide compressed breathing air that meets at least the requirement of the specification for Grade D breathing air as described in the Compressed Gas Association Commodity Specification G-7.1-1997 in the United States. In Canada, refer to CSA standard Z180.1, table for the quality of compressed breathing air. **Failure to do so may result in sickness or death.**
- Do not use with parts or accessories other than those approved by 3M as described in these *User Instructions* or on the NIOSH approval label for the respirator that you are using. **Failure to do so may result in sickness or death.**
- The line pressure must be kept within safe limits, 125 psig (8.79 kg/cm²) maximum. Dirt, oil and water, unless trapped or filtered out, may continue downstream in concentrated form and adversely affect the performance of the respirator and **may result in sickness or death.**
- To avoid hose degradation, which may adversely affect respirator performance and **result in sickness or death**, do not expose the hose to temperatures greater than 160⁰F (71⁰C).

Note: It is recommended that the air entering the breathing zone be no hotter than 110⁰F (43⁰C).

AIRLINE FITTINGS AND SPECIFICATIONS

3M compressed (supplied) air hoses are equipped with male pipe threads (MPTs) on both ends. Hoses are shipped with the appropriate type of hose fittings (listed in NIOSH Approvals section) threaded on each end: a plug on one end and a socket on the other end. Other types of fittings, approved for use with 3M hoses, are listed under Alternate Fittings. Compatible fittings for 3M™ Air Control Valves are also listed for each type of fitting.

“MPT” refers to Male Pipe Thread. “FPT” refers to Female Pipe Thread.

3M™ Low Pressure Hoses have a 1/2” inner diameter and accept 3/8” FPT fittings.

Standard Fittings (for W-3020 Low Pressure Supplied Air Hoses)

Industrial Interchange (Hansen or Parker) Manual connect: Pull socket sleeve then push plug and socket together to connect.

Hose Plug	Hose Socket	Plug for Air Control Valves	Working Temperature Range
W-3057-2	W-3224-2	W-3252-2	0 ⁰ F to 160 ⁰ F
3/8” FPT	3/8” FPT	1/4” MPT	(-18 ⁰ C to 71 ⁰ C)
Steel	Brass	Steel	

Alternate Fittings (for W-3020 Low-Pressure Supplied Air Hoses)

Twist Lock (Schrader) Automatic connect: Push socket and plug together to connect.

Hose Plug	Hose Socket	Plug for Air Control Valves	Working Temperature Range
W-3198-2	W-3199-2	W-3251-2	-25 ⁰ F to 160 ⁰ F
3/8” FPT	3/8” FPT	1/4” MPT	(-32 ⁰ C to 71 ⁰ C)
Steel	Steel & Brass	Steel	

To Replace a Socket/Plug on a Compressed Air Hose

1. Remove the fitting using two wrenches, one for the hose connector and the other for the airline fitting.
2. Apply pipe thread tape to the male threads on the hose connector and secure the fitting to the hose.
3. Attach the hose to a compressed air source with 38 psig (262 KN/m²). Use soapy water on the fittings to confirm a tight fit. Leakage in the connection will cause bubbles to form. Do not use if a tight fit is not confirmed.

INSPECTION

WARNING

To avoid the risk of exposure to contaminants which **could result in sickness or death** from an improperly functioning system, conduct the appropriate inspection described below.

Before each use, the entire hose and fittings must be inspected to ensure they are in good operating condition.

- Inspect hose material for physical damage such as cuts, tears, abrasion, burns, or ply separation.
- Check degradation from chemical or ultraviolet exposure.
- Check the socket and plug for dirt, damage, corrosion or anything that would restrict the airflow or prevent the fittings from locking securely.

Do not use the 3M hose if anything is noted during the user check that would prevent the hose and/or fittings from functioning properly.

COLD WEATHER TEST

If the hose has been stored at or below freezing temperatures (<32° F, <0° C) and there was any moisture in the system, there is the possibility that frozen water could cause the system to malfunction.

WARNING

Before using the supplied air system in below freezing temperatures, perform the cold weather test. Failure to do so could adversely affect respirator performance and **result in serious bodily injury, sickness or death.**

1. Connect the end of the supplied air hose to the air control device for the system that you will be using. The fittings should snap into the locking position. If the fittings will not lock, place the system in a warm (above freezing) location and remove moisture as outlined in Step 3.
2. Check gauge at filter and regulator panel to insure proper pressure is being applied to the system.
3. If there is reduced, or no airflow, there may be moisture frozen inside the system. Do not use the system. Place the system in a warm (above freezing) location. After the system has returned to room temperature, remove moisture from the supplied air or air control device by connecting the hose to a source of Grade D (or better) breathing air (In Canada, refer to CSA Standard Z180.1, table for the quality of compressed breathing air) and allow air to freely flow through the system to remove any trapped moisture.

CLEANING AND DISPOSAL

Wipe down the exterior of the hose using a cloth dampened in warm water with a neutral detergent. Be careful not to let any of the cleaning solution enter into the hose. Other detergents can be used, but should be tested first for adverse reactions.

Dispose of used product in accordance with applicable regulations.

FOR MORE INFORMATION and assistance on 3M Occupational Health and Environmental Safety products, contact your local 3M representative or call 3M OH&ESD Technical Service toll free in U.S.A., 1-800-243-4630. In Canada, call Technical Service at 1-800-267-4414.

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Environmental Safety Division**

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