DUAL MANIFOLD HOSE ASSEMBLY
P/N 200015–SERIES FOR USE WITH THE SCOTT AIR-PAK® SELF-CONTAINED BREATHING APPARATUS

WARNING
THIS DUAL MANIFOLD HOSE IS INTENDED FOR USE WITH RESPIRATORS WHICH MAY SUPPORT HUMAN LIFE IN HAZARDOUS ATMOSPHERES. FAILURE TO CAREFULLY FOLLOW THESE INSTRUCTIONS HEREIN MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING
IMPROPER USE OF THE RESPIRATOR EQUIPPED WITH THIS HOSE ASSEMBLY MAY RESULT IN SERIOUS INJURY OR DEATH. IMPROPER USE INCLUDES, BUT IS NOT LIMITED TO, USE WITHOUT ADEQUATE TRAINING, DISREGARD OF THE WARNINGS AND INSTRUCTIONS CONTAINED HEREIN AS WELL AS THE WARNINGS AND INSTRUCTIONS PROVIDED WITH THE RESPIRATOR, AND FAILURE TO INSPECT AND MAINTAIN THIS RESPIRATOR.
THE INFORMATION PRESENTED HEREIN IS MEANT TO SUPPLEMENT, NOT REPLACE THE WARNINGS AND INSTRUCTIONS PROVIDED WITH YOUR RESPIRATOR, AND THE INSTRUCTION, TRAINING, SUPERVISION, MAINTENANCE, AND OTHER ELEMENTS OF YOUR ORGANIZED RESPIRATORY PROTECTION PROGRAM.

Copyright © 2006, SCOTT, All Rights Reserved
DESCRIPTION

The respirator packaged with these instructions is equipped with the Emergency Breathing Support System (EBSS)/Extended Duration dual manifold hose P/N 200015-SERIES. This hose has a dual manifold with both male and female quick disconnects which may be used to either supply or receive air. When used as an EBSS hose, it may be used to supply air to one other respirator, or it may also be used to receive air from another respirator equipped with the same dual manifold hose. The male side of the dual manifold may also be used with a proper interconnect fitting as a connection to receive air from an Extended Duration air supply line.

When used by two persons for emergency breathing support, the respirator is intended for escape only. Breathing support may be provided one of two ways with this hose. First, this hose may be connected to any SCOTT 2.2, 3.0, or 4.5 SCBA configured with a disconnect in the regulator line by connecting the female side of the dual manifold to the regulator, facepiece and head harness of the user to be supported. Second, another respirator also fitted with this dual manifold hose may receive emergency breathing support by connecting the two dual manifolds together. Never connect the dual manifold hose to more than one other respirator at a time.

When used for Extended Duration, the male connector on the dual manifold component hose is attached to the supply air line with a specific adapter suitable for the style of air supply line used. Adapter P/N 200112-SERIES must be used when connecting to an air supply line. By connecting to a breathing air supply line, the respirator will operate as an open-circuit, pressure demand, entry and escape, combination self-contained breathing apparatus and type C supplied air respirator.

A belt mounted carrying pouch with a snap opening is included to facilitate storage of the dual manifold when not in use. The carrying pouch is mounted on the left hand side of a SCOTT Air-Pak 2.2/3.0/4.5/Fifty respirator (as shown in the illustrations in this instruction) and on the right hand side of the SCOTT N2G2 2.2/4.5 respirator. Operation is the same for both.

You must have the Operating and Maintenance Instructions originally supplied with the respirator apparatus. Additional copies are available through SCOTT Health and Safety and its distributors.

Special instruction and care is required for use of this hose for either purpose. When the respirator is pressurized, the dual manifold hose is also pressurized. The dual manifold male quick disconnect can release high pressure air (160 psi) when the check valve sleeve is pulled back. Do not pull back the check valve sleeve and point the male quick disconnect at anyone. High pressure air pointed at unprotected skin may cause transmission of air into the blood stream causing air embolism and other tissue damage. High pressure air introduced into a body cavity may cause serious or fatal injury. Care must also be exercised when using the dual manifold hose to avoid snagging or tangling of the hose and misuse or damage which could result in partial or complete loss of breathing air. Any damage to the hose such as cuts or breakage, or to the dual manifold or quick disconnects may result in uncontrolled air loss from the respirator. If damage occurs when the dual manifold hose is connected to another dual manifold hose in use by two persons for emergency breathing support, the air loss will be from both respirator cylinders.

This respirator is NIOSH/MSHA certified as described by the approval label attached to the assembly. However, NIOSH/MSHA has no guidelines and does not test nor certify respirators when being used to give or receive emergency breathing support.

This dual manifold hose is suitable for use in the same atmospheres and temperature ranges as the SCOTT Air-Pak SCBA to which it is installed. There is no potential hazard of using this hose per instructions in flammable atmospheres.

WARNING

NEVER WORK BEYOND THE END-OF-SERVICE INDICATOR ALARM THROUGH THE EXPECTATION THAT YOU CAN JOIN WITH ANOTHER RESPIRATOR USER FOR ESCAPE. OTHER RESPIRATOR USERS ARE ALSO CONSUMING THEIR AIR AND MAY NOT HAVE SUFFICIENT SUPPLY FOR TWO PEOPLE TO ESCAPE WHEN BREATHING FROM ONE CYLINDER. A DELAY IN LEAVING THE AREA AFTER ALARM ACTUATION MAY LEAD TO A LOSS OF BREATHING AIR RESULTING IN SERIOUS INJURY OR DEATH.

WARNING

ALL RESPIRATOR USERS MUST HAVE A PROPERLY FITTED FACEPIECE. FAILURE TO PROPERLY FIT AND DON THE FACEPIECE MAY RESULT IN A POOR FACE TO FACEPIECE SEAL DURING USE. A POOR FACE TO FACEPIECE SEAL MAY REDUCE THE DURATION OF USE OF THE RESPIRATOR AND/OR EXPOSE THE USER TO THE ATMOSPHERE THE RESPIRATOR IS INTENDED TO PROTECT AGAINST RESULTING IN SERIOUS INJURY OR DEATH.

WARNING

COMPRESSED AIR IS HAZARDOUS. WHEN THE RESPIRATOR IS PRESSURIZED, THE DUAL MANIFOLD HOSE CAN EMIT 160 PSI OF COMPRESSED AIR IF THE CHECK VALVE SLEEVE ON THE MALE QUICK DISCONNECT IS RETRACTED. DO NOT RETRACT THE CHECK VALVE SLEEVE WHEN THE RESPIRATOR IS PRESSURIZED. DO NOT POINT THE DUAL MANIFOLD HOSE AT ANYONE AND RETRACT THE CHECK VALVE SLEEVE. HIGH PRESSURE AIR CAN PASS THROUGH THE SKIN OR CAN DAMAGE TISSUES IN BODY CAVITIES RESULTING IN SERIOUS INJURY OR DEATH.

WARNING

WHEN THE RESPIRATOR IS PRESSURIZED, THE MALE QUICK DISCONNECT ON THE DUAL MANIFOLD CAN RELEASE HIGH PRESSURE AIR WHEN THE CHECK VALVE SLEEVE IS PULLED BACK, RELEASING AIR REDUCES THE AMOUNT OF BREATHING AIR AVAILABLE IN THE CYLINDER. FAILURE TO CONSERVE BREATHING AIR MAY RESULT IN INSUFFICIENT AIR FOR AN EMERGENCY SITUATION WHICH MAY LEAD TO SERIOUS INJURY OR DEATH.

WARNING

USE CARE WHEN HANDLING THE DUAL MANIFOLD HOSE. IF THE RESPIRATOR IS PRESSURIZED AND THE HOSE BECOMES CUT OR DAMAGED, IT MAY CAUSE LOSS OF THE AIR SUPPLY IN THE AIR SUPPLY CYLINDER. IF CONNECTED TO ANOTHER DUAL MANIFOLD ON ANOTHER RESPIRATOR, IT MAY CAUSE LOSS OF THE AIR SUPPLY FROM BOTH CYLINDERS. LOSS OF THE CYLINDER AIR SUPPLY MAY RESULT IN SERIOUS INJURY OR DEATH.
REGULAR OPERATIONAL INSPECTION

1. Verify that the installation of the dual manifold hose does not interfere with the removal and reinstallation of the cylinder and valve assembly.

2. Inspect both the male and female quick disconnects on the dual manifold. Pay special attention to the following:
   a) Inspect the operation of the external check valve sleeve on the male quick disconnect. If any damage is noted, do not use the apparatus. Remove it from service and tag for repair.
   b) Inspect the condition of the male quick disconnect for signs of wear. Particularly look for wear on the locking ridge as shown in FIGURE 1. If the coating is worn through and bare metal is showing, do not use the apparatus. Remove it from service and tag for repair.

3. Open the cylinder valve on the self-contained breathing apparatus (SCBA) to pressurize the system.

WARNING

COMPRESSED AIR IS HAZARDOUS. WHEN THE RESPIRATOR IS PRESSURIZED, THE DUAL MANIFOLD HOSE CAN EMIT 160 PSI OF COMPRESSED AIR IF THE CHECK VALVE SLEEVE ON THE MALE QUICK DISCONNECT IS RETRACTED. DO NOT RETRACT THE CHECK VALVE SLEEVE WHEN THE RESPIRATOR IS PRESSURIZED. DO NOT POINT THE DUAL MANIFOLD HOSE AT ANYONE AND RETRACT THE CHECK VALVE SLEEVE. CARELESS HANDLING OF COMPRESSED AIR MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING

VERIFY THAT THE EXTERNAL CHECK VALVE SLEEVE ON THE MALE SIDE OF THE DUAL MANIFOLD MOVES FREELY AND SEALS PROPERLY WHEN THE MALE QUICK DISCONNECT IS NOT IN USE. FAILURE TO IDENTIFY A MALFUNCTION OF THE EXTERNAL CHECK VALVE SLEEVE MAY LEAD TO LOSS OF BREATHING AIR WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

NOTE

FOR APPARATUS EQUIPPED WITH A REGULATOR WITH A DONNING SWITCH, PUSH IN THE DONNING SWITCH TO PREVENT FLOW WHILE PERFORMING LEAK TEST.

FOR APPARATUS WITH AUTOMATIC SHUT-OFF, OPEN THE CYLINDER VALVE AND PERFORM LEAK TEST AS DEFINED.

FOR PRESSURE-DEMAND APPARATUS WITHOUT AUTOMATIC SHUT-OFF, DON THE FACEPIECE PRIOR TO OPENING THE CYLINDER VALVE AND WHILE PERFORMING LEAK TEST, OTHERWISE AIR WILL CONTINUE TO FLOW.

4. Check the connection of the dual manifold hose to the outlet manifold assembly using soap solution or other leak detection methods. There shall be no evidence of external leakage.

5. Check the quick disconnect fittings at the end of the dual manifold hose. Minor leakage, not to exceed one bubble in five seconds, is acceptable. If greater flow is detected, do not use the apparatus. Remove it from service and tag for repair.

6. Insert the female end of a Male/Female adapter P/N 200112-SERIES into the male fitting on the dual manifold. Check that there is no evidence of flow from the end of the adapter. See FIGURE 2. Remove the adapter from the male coupling.

FIGURE 1

LOOK FOR WEAR ON LOCKING RIDGE

FIGURE 2

REGULAR OPERATIONAL INSPECTION CONTINUED ON NEXT PAGE...
7. Insert the male end of each Male/Female adapter P/N 200112-SERIES into the female fitting on an air supply line. Check that there is no evidence of flow from the end of the adapter or any sign of leakage from the assembly. See FIGURE 3. Minor leakage, not to exceed one bubble in five seconds, is acceptable. If greater flow is detected, do not use the apparatus. Remove it from service and tag for repair.

8. Don the system and verify proper operation as a self-contained breathing apparatus in accordance with the Operating and Maintenance Instructions supplied with the SCBA.
9. Close cylinder and vent residual pressure from system.

**PREPARATION FOR USE OF THE EMERGENCY BREATHING SUPPORT SYSTEM (EBSS)**

Because two users will be connected to one cylinder of air, the duration of the air supply cylinder will be significantly less than the rated duration of the respirator supplying the air to one person. For example, when connected to a second respirator user and emergency breathing support is given, a fully charged 30 minute rated respirator may supply no more than 15-minutes of emergency escape breathing support for two people. The actual duration obtained will probably be less and depends on the same conditions as outlined in the service life section of the standard respirator instructions.

 REGARDLESS OF THE CIRCUMSTANCES, THE USERS ENGAGED IN EMERGENCY BREATHING SUPPORT WITH THE EBSS AUXILIARY HOSE MUST IMMEDIATELY EXIT THE AREA REQUIRING RESPIRATORY PROTECTION. All other limitations on respirator use remain the same during emergency breathing support. However, the users must be aware of the effect of two users breathing off the same air supply and the amount of air in the cylinder remaining at the time support is given. The users must also be aware of the importance of maintaining a secure face to facepiece seal to both users while exiting the area requiring respiratory protection.

Two methods of EBSS connection are available when using this hose:

1. If the person requiring support does not have a matching dual manifold hose, he must separate the quick disconnect in his regulator hose and connect his regulator hose to the female side of the dual manifold hose of the person offering support.
2. If the person requiring support has a matching dual manifold hose, the two dual manifolds may be connected either male-to-female or female-to-male to begin supplying air from the respirator of the person offering support.

The following procedure contains the steps required to familiarize the user with the connect and disconnect process. Sufficient practice and training is required to be able to perform these procedures under emergency and stressful situations and in difficult circumstances such as conditions of impaired visibility or with gloves on, etc.

**WARNING**

ONCE THE END-OF-SERVICE INDICATOR ALARM HAS ACTIVATED ON THE INTENDED SUPPORT RESPIRATOR, DO NOT USE THAT RESPIRATOR FOR BREATHING SUPPORT. ALTHOUGH THE SYSTEM WILL FUNCTION PROPERLY, ESCAPE TIME WILL BE EXTREMELY LIMITED. A SUDDEN TERMINATION OF BREATHING AIR MAY RESULT IN SERIOUS INJURY OR DEATH.

**WARNING**

THE RESPIRATOR USER MUST IMMEDIATELY LEAVE THE AREA REQUIRING RESPIRATORY PROTECTION WHEN AN END-OF-SERVICE INDICATOR ALARM ACTUATES. ACTUATION OF ANY END-OF-SERVICE INDICATOR ALARM WARNS THAT APPROXIMATELY 25% OF FULL PRESSURE REMAINS IN THE AIR SUPPLY CYLINDER OR THAT THERE IS A MALFUNCTION IN THE RESPIRATOR. A DELAY IN LEAVING THE AREA AFTER ALARM ACTUATION MAY RESULT IN SUDDEN TERMINATION OF THE AIR SUPPLY WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.
Two different female couplings, the Notched Sleeve (FIGURE 4A) or the Pull-back Sleeve (FIGURE 4B), may be found on SCOTT AIR-PAK respirators. Both work with the same male plug. Verify which quick disconnect is on your respirator and understand its operation and use thoroughly. Refer to the following instructions and illustrations:

**Notched Sleeve Coupling use—See FIGURE 4A**
1. To connect, push plug “D” into socket until notched sleeve “C” pops forward.
2. To secure, rotate notched sleeve ¼ to ½ turn so notch “B” does not line up with Rivet “A”. Test for proper engagement by tugging on the coupling.
3. To disconnect, rotate sleeve “C” until notch “B” lines up with rivet head “A” on the socket. Slide sleeve “C” back toward the plastic guard and plug “D” will separate.

**WARNING**

*Users of this system may have to disconnect and connect the hose coupling quickly or under stressful conditions. Users must be able to operate the coupling under the conditions which may be encountered during use, such as: without being able to see the coupling, with gloves on, with one hand, etc. Failure to be able to operate the coupling in all situations may result in an interruption of the breathing air supply that could lead to serious injury or death.*

**NOTE**

*If sleeve “C” is not back, rotate until notch “B” lines up with rivet head “A” and slide sleeve “C” back toward the guard until the sleeve locks back in place with a “click”.*

**Pull-back Sleeve Coupling use—See FIGURE 4B**
1. To connect, push plug “D” into socket until the locking sleeve “E” pops forward. Test for proper engagement by tugging on the coupling.
2. To disconnect, push the plug “D” into the socket while pulling the locking sleeve “E” back toward the guard. The plug “D” will separate.

**WARNING**

*Failure to properly secure and check engagement of the coupling as described may lead to hose separation and loss of breathing air resulting in possible injury or death.*

**NOTE**

*The female side of the dual manifold hose is equipped with the pull-back sleeve type coupling.*

**INSPECTION, CLEANING AND STORAGE**

Clean and maintain in accordance with Operation and Maintenance Instructions provided with the SCBA equipment. Storage conditions shall be the same as the SCBA equipment.
EMERGENCY BREATHING SUPPORT SYSTEM
OPERATION AND USE
Operation of the respirator while giving or receiving emergency breathing support requires specific training. How these situations are handled will be directly related to the experience and training of the individuals. Only through practice and proper training can the users become familiar enough to safely perform the procedures required in an emergency or stressful situation.

1. The person requiring support must have either a regulator and hose assembly with a male quick disconnect or a matching dual manifold hose. The person giving support must have this dual manifold hose on his respirator.
2. When offering Emergency Breathing Support, at least 1/2 the full rated capacity of air must remain in the cylinder. If egress is begun immediately, the respirator duration will approximately equal the duration when the end-of-service indicator actuates for a single user.
3. Open the snap opening on the carrying pouch and extend the dual manifold hose. See FIGURE 5
4. Remove the rubber dust cap from the dual manifold on the hose. See FIGURE 6.

5. There are two methods of connection possible as follows:
   a) If the person requiring support does not have a matching dual manifold hose, he must hold his/her breath and separate the quick disconnect on his/her regulator and connect it to the female side of the dual manifold hose on the support respirator. While holding the female coupling behind the guard, insert plug “D” into the socket until engaged as evidenced by the sleeve moving forward with a sharp “click”. (On the Notched-sleeve coupling only, rotate the sleeve 1/4 to 1/2 turn so that notch does not line up with the rivet head to secure the coupling.)
   b) If the person requiring support does have a matching dual manifold hose, the two manifolds may be joined either male-to-female or female-to-male to accomplish the connection. Connection will immediately begin air flow to both facepieces.

NOTE
WHEN TWO RESPIRATORS ARE CONNECTED BY THE DUAL MANIFOLD HOSES AND THE RESPIRATOR REQUIRING SUPPORT HAS ACTIVATED ITS VIBRALERT, THE VIBRALERT ON THE RESPIRATOR OF THE PERSON GIVING SUPPORT WILL ALSO BE ACTIVATED. THE AIR WILL BE SUPPLIED TO BOTH RESPIRATORS FROM THE RESPIRATOR REQUIRING SUPPORT UNTIL THAT AIR SUPPLY IS SUFFICIENTLY DEPLETED, AT WHICH TIME THE AIR THEN WILL BE SUPPLIED FROM THE RESPIRATOR GIVING SUPPORT AND BOTH VIBRALERTS WILL STOP. WHEN THE CYLINDER OF THE RESPIRATOR GIVING SUPPORT HAS BEEN SUFFICIENTLY DEPLETED, BOTH VIBRALERTS WILL AGAIN BE ACTIVATED.
6. Test for positive engagement by tugging on the couplings.
WARNING
AFTER DISCONNECTING THE SUPPORTED USER, REMOVE THE REGULATOR FROM THE FACEPIECE OR THE FACEPIECE WITH THE REGULATOR CONNECTED FROM THE USER RECEIVING EMERGENCY BREATHING SUPPORT. FAILURE TO REMOVE FACEPIECE OR REGULATOR AFTER DISCONNECT FROM AIR SUPPLY MAY RESULT IN SERIOUS INJURY OR DEATH.

NOTE
DO NOT ALLOW THE DUAL MANIFOLD HOSE TO BECOME TANGLED OR SNAGGED WHILE IN USE. IF THE HOSE BECOMES TANGLED OR SNAGGED, IT MAY DISLODGE THE FACEPIECE FROM ONE OR BOTH USERS OR IT MAY PERMIT DAMAGE OF THE HOSE WHICH COULD CAUSE RAPID AIR LOSS FROM BOTH CYLINDER AIR SUPPLIES.

The support respirator has now been converted into an emergency breathing support system for two person escape. THE USERS ENGAGED IN EMERGENCY BREATHING SUPPORT WITH THE DUAL MANIFOLD HOSE MUST IMMEDIATELY EXIT THE AREA REQUIRING RESPIRATORY PROTECTION.

TERMINATION OF EBSS USE
To terminate emergency breathing support:
1. Leave the contaminated area or be certain respiratory protection is no longer required.
2. Disconnect the supported user from the dual manifold hose on the respirator providing support.
3. Remove the regulator from the facepiece or the facepiece with the regulator connected from the user being supported.
4. Replace the rubber dust cap on the dual manifold hose and return the hose to the carrying pouch.

ADDITIONAL PRECAUTIONS
1. Always make a thorough evaluation of the situation before offering emergency breathing support for escape.
2. When using an EBSS for escape and the VIBRALERT end-of-service indicator alarm is activated, it will be heard or felt in both facepieces. Under certain conditions, as in very heavy breathing in unison, the alarm may be intermittent in-time with the breathing in one or both facepieces.
3. Never rely on the expectation that breathing support will be available after your end-of-service indicator alarm has actuated. The Emergency Breathing Support System must be used only in emergency escape situations and not as a routine method of exiting a hazardous atmosphere.
4. When a positive pressure regulator is used on either the respirator giving or receiving emergency breathing support, extra care must be taken not to dislodge that facepiece as this could result in a loss of valuable air if the mask is not replaced immediately.
5. Do not retract the check valve sleeve on the male side of the dual manifold when the respirator is pressurized. Retracting the check valve sleeve will cause loss of the breathing air supply in the cylinder and will emit a high pressure stream of compressed air which may be dangerous.

WARNING
WHEN THE DUAL MANIFOLD HOSE IS EXTENDED FROM THE CARRYING POUCH, DO NOT PERMIT THE HOSE TO SNAG OR TO BECOME TANGLED. SNAGGING OR TANGLING THE HOSE WHEN CONNECTED TO THE FACEPIECE OF ANOTHER RESPIRATOR USER MAY DISLODGE THE FACEPIECE EXPOSING THE USER TO THE HAZARDOUS ATMOSPHERE AND MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING
USE CARE WHEN HANDLING THE DUAL MANIFOLD HOSE. IF THE RESPIRATOR IS PRESSURIZED AND THE HOSE BECOMES CUT OR DAMAGED, IT MAY CAUSE LOSS OF THE AIR SUPPLY IN THE AIR SUPPLY CYLINDER. IF CONNECTED TO ANOTHER DUAL MANIFOLD ON ANOTHER RESPIRATOR, IT MAY CAUSE LOSS OF THE AIR SUPPLY FROM BOTH CYLINDERS. LOSS OF THE CYLINDER AIR SUPPLY MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING
AFTER DISCONNECTING THE SUPPORTED USER, REMOVE THE REGULATOR FROM THE FACEPIECE OR THE FACEPIECE WITH THE REGULATOR CONNECTED FROM THE USER RECEIVING EMERGENCY BREATHING SUPPORT. FAILURE TO REMOVE FACEPIECE OR REGULATOR AFTER DISCONNECT FROM AIR SUPPLY MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING
COMPRESSED AIR IS HAZARDOUS. WHEN THE RESPIRATOR IS PRESSURIZED, THE DUAL MANIFOLD HOSE CAN EMIT 160 PSI OF COMPRESSED AIR IF THE CHECK VALVE SLEEVE ON THE MALE QUICK DISCONNECT IS RETRACTED. DO NOT RETRACT THE CHECK VALVE SLEEVE WHEN THE RESPIRATOR IS PRESSURIZED. DO NOT POINT THE DUAL MANIFOLD HOSE AT ANYONE AND RETRACT THE CHECK VALVE SLEEVE. CARELESS HANDLING OF COMPRESSED AIR MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING
WHEN THE DUAL MANIFOLD HOSE IS EXTENDED FROM THE CARRYING POUCH, DO NOT PERMIT THE HOSE TO SNAG OR TO BECOME TANGLED. SNAGGING OR TANGLING THE HOSE MAY RESULT IN ENTRAPMENT WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.
PREPARATION FOR USE OF THE EXTENDED DURATION HOSE

The Emergency Breathing Support System (EBSS)/Extended Duration dual manifold hose component P/N 200015-SERIES may also be used to extend the duration of use of the Air-Pak self-contained breathing apparatus (SCBA) while preserving the supply of air in the SCBA cylinder. By connecting to a breathing air supply line, the respirator will operate as an open-circuit, pressure demand, entry and escape, combination self-contained breathing apparatus and type C supplied air respirator. Connection to an air supply line is always made to the male side of the dual manifold using a special Male/Female adapter.

AIR SUPPLY REQUIREMENTS

1. AIR QUALITY - The user must provide breathing air which is respirable, contains no less than 19.5% oxygen by volume and meets the minimum grade requirements of the Compressed Gas Association (CGA) Commodity Specification for Air, G-7.1, grade D or higher, or meets with air requirements of CE EUROPEAN STANDARD EN 132. In addition to meeting the requirements stated above, the air must be dry to a dew point of -65° F / -54° C or less. Do not use with oxygen or oxygen enriched air.

2. AIR SUPPLY PRESSURE AND FLOW - The air supply pressure must be maintained between 60 psig and 115 psig while flowing at least 200 liters per minute (lpm) to each user. Use a pressure regulator rated for high flow that can maintain the required pressure and flow to each user while breathing. The no-flow supply pressure may be different from the pressure observed while breathing. If the air supply pressure can exceed 125 pounds per square inch (psig), a pressure release mechanism, set to actuate no higher than 150 psig, must be installed so that the air pressure at the point of attachment of the supply hose will not exceed 125 psig.

3. TOTAL LENGTH OF AIR SUPPLY LINE - Hoses are available in lengths indicated by the last three digits of the part number. For example, P/N 30010-025 is a twenty-five foot hose with Hansen† fittings. Hoses are available in incremental lengths of 25 feet up to 100 feet. Refer to TABLE 1, LIMITATIONS AND OPERATING INSTRUCTIONS FOR SUPPLY HOSE and FIGURE 10 for details on operating the quick disconnect couplings and for limitations on air supply line length and number of segments allowed.

4. Always provide enough air supply hose between the air source and the respirator so that movement of the respirator user is not restricted in any way.

5. A MALE/FEMALE ADAPTER IS PROVIDED FOR CONNECTING TO AN AIR SUPPLY LINE. THE ADAPTER MUST BE USED BECAUSE THE CHECK VALVE IN THE ADAPTER PREVENTS LOSS OF BREATHING AIR FROM THE SCBA IF THE AIR SUPPLY LINE IS CUT OR DAMAGED WHILE IN USE. This adapter is available in several versions to work with SCOTT air supply lines:

   - Adapter P/N 200112-01 is compatible with air supply lines P/N 30010 with Hansen† 3000 series fittings
   - Adapter P/N 200112-02 is compatible with air supply lines P/N 26370 with Foster† fittings.
   - Adapter P/N 200112-03 is compatible with air supply lines P/N 26369 with Hansen† HK series fittings.
   - Adapter P/N 200112-04 is compatible with air supply lines P/N 30020 with Schrader† fittings.

6. The Male/Female adapter is equipped with a chain tether and hose clamp to attach to the air supply line (NOT to the dual manifold hose).

NOTE

MALE/FEMALE ADAPTERS MAY BE INSTALLED AT THE FINAL CONNECTOR ON EVERY AIR SUPPLY LINE TO BE USED WITH THE DUAL MANIFOLD HOSE.

† Hansen is a registered trademark of Tuthill Corporation.
† Foster is a registered trademark of Foster Manufacturing Co., Inc.
† Schrader is a registered trademark of Scovill, Inc.

WARNING

READ AND UNDERSTAND THIS AND OTHER APPLICABLE INSTRUCTIONS, LABELS AND WARNINGS PACKAGED WITH THE RESPIRATOR BEFORE ATTEMPTING TO USE THIS RESPIRATOR. IMPROPER USE OF THIS RESPIRATOR MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING

PRIOR TO OPERATION, THE USER MUST VERIFY THAT THE SUPPLY PRESSURE AND FLOW AVAILABLE ARE IN ACCORDANCE WITH THESE INSTRUCTIONS FOR USE. OPERATION OF THIS EQUIPMENT WITH INADEQUATE SUPPLY PRESSURE OR FLOW MAY LEAD TO SERIOUS INJURY OR DEATH.

WARNING

AIR REGULATORS, BECOME COLD DURING USE. AIR CONTAINING MOISTURE USED TO SUPPLY THE RESPIRATOR MAY FREEZE THE BREATHING REGULATOR EVEN THOUGH THE TEMPERATURE IS WELL ABOVE 32° F / 0° C. FROZEN MOISTURE IN THE BREATHING REGULATOR MAY CAUSE A MALFUNCTION OF THE APPARATUS WHICH MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING

USE CARE WHEN HANDLING THE DUAL MANIFOLD HOSE AS WELL AS ANY AIR SUPPLY HOSE LINES. DAMAGE TO A PRESSURIZED AIR HOSE MAY CAUSE THE HOSE TO MOVE VIOLENTLY WHICH COULD CAUSE SERIOUS INJURY OR DEATH.

WARNING

THE MALE/FEMALE ADAPTER MUST BE USED FOR CONNECTING TO AN AIR SUPPLY LINE. THE CHECK VALVE IN THE ADAPTER PREVENTS LOSS OF BREATHING AIR FROM THE SCBA IF THE AIR SUPPLY LINE IS CUT OR DAMAGED WHILE IN USE. FAILURE TO USE THE ADAPTER WHEN CONNECTING TO AN AIR SUPPLY LINE MAY RESULT SUDDEN LOSS OF BREATHING AIR FROM THE SCBA WHICH COULD CAUSE SERIOUS INJURY OR DEATH.
EXTENDED DURATION OPERATION AND USE

Perform the REGULAR OPERATIONAL INSPECTION of the dual manifold hose as described in this instruction. When not in use, always keep the dual manifold covered for protection with the attached caps.

While using the dual manifold hose for extended duration, the cylinder valve on the SCBA must be kept closed. During periods of extended activity, occasionally check of the remaining cylinder air supply by opening the cylinder valve and observing the remote pressure gauge. Determine if the amount of remaining air is sufficient for the planned activity or for escape from the hazardous atmosphere. Be aware that at very high work rates and at peak inhalation flow, the actual time available from a partial cylinder may be less than expected.

NOTE
WHILE USING THE DUAL MANIFOLD HOSE FOR CONNECTION TO AN AIR SUPPLY LINE FOR EXTENDED DURATION, THE CYLINDER VALVE ON THE SCBA MUST REMAIN CLOSED TO PRESERVE THE AIR SUPPLY IN THE CYLINDER. WITH THE CYLINDER VALVE CLOSED, RESIDUAL PRESSURE TRAPPED IN THE SYSTEM MAY SHOW ON THE REMOTE PRESSURE GAUGE. WHILE USING THE AIR SUPPLY LINE, THIS RESIDUAL PRESSURE MAY REMAIN OR MAY BE DEPLETED WITHOUT AFFECTING THE OPERATION OF THE RESPIRATOR.

Entry into the potentially hazardous atmosphere may be performed either by connecting to the air supply line first, or by using the SCBA to enter and then connecting to an air supply line while in the potentially hazardous atmosphere. While in a safe breathing environment, don the apparatus and perform all checks in accordance with the Operation and Maintenance Instructions for the apparatus. Open the cylinder valve and verify that the breathing air cylinder is full. Check for proper operation of the system including alarm actuation.

1. FOR ENTRY USING THE AIR SUPPLY LINE:
   a) Insert the male end of the Male/Female adapter onto the female fitting on the air supply line and check for proper engagement. Check that there is no evidence of flow from the end of the adapter. See FIGURE 7.

   ![FIGURE 7](image)
   
   AIR SUPPLY LINE
   MALE/FEMALE ADAPTER
   CHAIN TETHER

   b) Open the pouch and feed the male connector on the dual manifold hose through the opening in the side of the pouch as shown in FIGURE 8. The fabric gusset fits between the male and female connectors on the manifold. Close the pouch and secure the snaps.

   ![FIGURE 8](image)
   
   FABRIC GUSSET FITS BETWEEN THE CONNECTORS

WARNING
IF THE CYLINDER VALVE IS NOT FULLY CLOSED, AIR FROM THE SELF-CONTAINED AIR SUPPLY CYLINDER MAY BE GRADUALLY DEPLETED. ALWAYS BE SURE ENOUGH AIR REMAINS IN THE CYLINDER TO EXIT THE HAZARDOUS ATMOSPHERE. FAILURE TO MONITOR AVAILABLE AIR SUPPLY MAY RESULT IN A SITUATION THAT COULD LEAD TO SERIOUS INJURY OR DEATH.

WARNING

WARNING

EXTENDED DURATION OPERATION AND USE CONTINUED ON NEXT PAGE...
EXTENDED DURATION OPERATION AND USE CONTINUED...

c) Connect the adapter on the air supply line to the male connector and check for proper engagement. See FIGURE 9.

![FIGURE 9](image)

WARNING
USE CARE WHEN HANDLING THE DUAL MANIFOLD HOSE. IF THE RESPIRATOR IS PRESSURIZED AND THE HOSE BECOMES CUT OR DAMAGED, IT MAY CAUSE LOSS OF THE AIR SUPPLY IN THE AIR SUPPLY CYLINDER. LOSS OF THE CYLINDER AIR SUPPLY MAY RESULT IN SERIOUS INJURY OR DEATH.

WARNING
THE CYLINDER VALVE MUST BE FULLY CLOSED WHEN USING THE HOSE FOR AIR SUPPLY. THE CYLINDER VALVE MUST BE CLOSED WHEN USING THE HOSE FOR AIR SUPPLY. THE CYLINDER VALVE MUST BE CLOSED WHEN USING THE HOSE FOR AIR SUPPLY.

WARNING
WHEN USING THE DUAL MANIFOLD HOSE FOR EXTENDED DURATION CONNECTION TO A BREATHING AIR SUPPLY LINE, ALWAYS KEEP THE DUAL MANIFOLD HOSE SECURED WITHIN THE CARRYING POUCH AND THE MALE CONNECTOR PROJECTING THROUGH THE SIDE OPENING OF THE CARRYING POUCH. FAILURE TO KEEP THE DUAL MANIFOLD SECURED DURING USE MAY RESULT IN SNAGGING OF THE DUAL MANIFOLD AND THE AIR SUPPLY LINE WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.

2. FOR ENTRY USING THE SELF-CONTAINED BREATHING APPARATUS:

a) Open the cylinder valve and verify that the breathing air cylinder is full.
b) Open the pouch and feed the male connector on the dual manifold hose through the opening in the side of the pouch as shown in FIGURE 6. Close the pouch and secure the snaps.
c) Complete preparations for safe entry and enter the hazardous or potentially hazardous environment.
d) Upon arrival at the pre-positioned air supply line, insert the male end of the Male/Female adapter onto the female fitting on the air supply line and check for proper engagement. Check that there is no evidence of flow from the end of the adapter.
e) Connect the male connector on the dual manifold hose to the adapter on the air supply line and check for proper engagement. See FIGURE 7.
f) Close the cylinder valve. Breathing should continue free and unrestricted as air is supplied through the pre-positioned air supply line. THE CYLINDER VALVE MUST BE CLOSED WHEN USING THE HOSE FOR AIR SUPPLY. Proceed with planned activity.

3. WHILE IN THE HAZARDOUS ATMOSPHERE, TRANSFER TO ANOTHER PRE-POSITIONED AIR SUPPLY LINE AS FOLLOWS:
a) Open the cylinder valve; the alarm may be initiated momentarily then stop. Check the remote pressure gauge for the availability of sufficient air supply depending upon planned activity.
b) Disconnect the adapter and air supply line from the dual manifold hose. Check that there is no evidence of flow from the end of the dual manifold hose. If flow is detected, immediately proceed to a safe breathing environment. The Male/Female adapter may be left connected to the air supply line.
c) Proceed to the pre-positioned air supply line.
d) Insert the male end of the Male/Female adapter onto the female fitting on the air supply line and check for proper engagement. Check that there is no evidence of flow from the end of the adapter.
e) Connect the male connector on the dual manifold hose to the adapter on the pre-positioned air supply line and check for proper engagement.
f) Close the cylinder valve. Breathing should continue free and unrestricted as air is supplied through the pre-positioned air supply line. Continue with planned activity.

WARNING
ALWAYS BE SURE ENOUGH AIR REMAINS IN THE CYLINDER TO EXIT THE HAZARDOUS ATMOSPHERE. FAILURE TO MONITOR AVAILABLE AIR SUPPLY MAY LEAD TO SERIOUS INJURY OR DEATH.
EXIT FROM HAZARDOUS ATMOSPHERES
1. BY AIR SUPPLY LINE - Upon completion of activity, exit from the hazardous environment while attached and supplied by the air supply line. Upon arrival at a safe breathing environment, remove the facepiece and terminate respirator use. Disconnect the air supply line from the dual manifold hose. The Male/Female adapter may be left connected to the air supply line.
2. BY SELF-CONTAINED AIR SUPPLY - Upon completion of activity, open the cylinder valve and observe the remote pressure gauge. The alarm may sound momentarily then stop. Disconnect the air supply line from the dual manifold hose, and exit. The Male/Female adapter may be left connected to the air supply line.

ESCAPE FROM HAZARDOUS ATMOSPHERES
1. If an emergency escape is necessary, open the cylinder valve of the self-contained air supply, observe the remote pressure gauge.
2. Disconnect the air supply line from the dual manifold hose.
3. Immediately proceed to a safe breathing environment.

TROUBLESHOOTING OF EXTENDED DURATION USE
1. RESTRICTED OR INTERRUPTED FLOW THROUGH AIR SUPPLY LINE: If breathing becomes restricted or is completely interrupted while being supplied by the air supply line, open the cylinder to regain normal breathing capability. Check the remote pressure gauge and decide whether to transfer to another pre-positioned air supply line, continue the activity using self-contained air supply, or leave the hazardous area.
2. AUTOMATIC SHUT-OFF: Some SCBA models may be equipped with a facepiece mounted regulator with an automatic shut-off device that actuates when the regulator is removed from the facepiece. This device may not shut off when air is being supplied only through the air supply line since the maximum flow through the air supply line is less than the flow provided by the self-contained air supply. Open the cylinder valve to allow the shut-off to actuate and then close the cylinder valve.

OPERATION OF SUIT VENTILATION SYSTEM
1. While wearing an encapsulating chemically protective suit, an SCBA attached to an air supply line for extended duration shall be operated as stated above. The ventilation system shall be operated in accordance with SCOTT P/N 89239-01, Instructions for Use of Suit Ventilation Hose Assembly P/N 803801-01 installed on a SCOTT Air-Pak 2.2 or 4.5 SCBA.
2. When operating the respirator from the dual manifold hose with suit ventilation attached, whenever the hose line air supply is disconnected for any reason, the suit ventilation must also be disconnected at the SCOTT coupling.

OPERATION OF APPLIANCE HOSE SYSTEM
1. An SCBA attached to an air supply line for extended duration and operating a life support or safety related appliance shall be operated as stated above. The appliance hose shall be operated in accordance with SCOTT P/N 89263-01, Instructions for Use of Appliance Hose Assembly P/N 803801-02 installed on a SCOTT Air-Pak SCBA.
2. When operating the respirator from the dual manifold hose for extended duration use with the appliance hose attached, whenever the hose line air supply is disconnected for any reason, the appliance must also be disconnected at the SCOTT coupling.

EXTENDED DURATION OPERATION AND USE CONTINUED ON NEXT PAGE...
EXTENDED DURATION OPERATION AND USE CONTINUED...

TABLE 1
LIMITATIONS AND OPERATING INSTRUCTIONS FOR SUPPLY HOSE

NOTE: THE AIR SUPPLY PRESSURE MUST BE MAINTAINED BETWEEN 60 PSIG AND 115 PSIG WHILE FLOWING AT LEAST 200 LITERS PER MINUTE (LPM) TO EACH USER.

| Supply Hose† | Approved Total Lengths§ in feet | Maximum Number of Segments¶ Approved | INSTRUCTIONS FOR OPERATION OF COUPLINGS
|--------------|---------------------------------|--------------------------------------|----------------------------------------------
| 26369 Series with stainless steel Hansen HK couplings | 0 to 150 | 6 | 1. To connect the coupling, rotate socket sleeve “B” until the alignment notch in the sleeve is in line with alignment peg in body “A”.
2. Slide sleeve “B” toward the supply hose (away from plug “C”) and insert plug “C” into socket “A”. Release sleeve “B” while pushing the plug into the socket until engaged, as evidenced by a “click”.
Test for positive engagement by tugging on the plug.
3. Rotate sleeve “B” one-quarter to one-half turn to lock the plug against accidental release.
4. To disconnect the coupling, realign sleeve “B” with the body of socket “A” as described in step 1. Slide sleeve “B” away from the body (toward the supply hose) to release the plug fitting from the socket.
IF IT IS NOT PRACTICAL TO SEE THE ALIGNMENT NOTCH IN THE SLEEVE, USE THE FOLLOWING PROCEDURE TO DISCONNECT THE COUPLING:
1. Grasp sleeve “B” with the right hand.
2. Simultaneously rotate and push the sleeve away from the plug until the alignment notch in the sleeve lines up with the alignment peg in the body and the socket separates from the plug.

| 26370 Series with stainless steel Foster couplings | 0 to 300 | 12 | 1. Insert plug fitting “C” into socket “A” and continue pushing until it is engaged as evidenced by a “click”.
2. Test for positive engagement by tugging on the plug.
3. Disconnect the coupling by rotating sleeve “B” 1/8 turn in the clockwise direction as viewed from the female end of socket “A”.

| 30010 Series with brass Hansen couplings | 0 to 300 | 12 | 1. Insert plug fitting “C” into socket “A” and continue pushing until it is engaged as evidenced by a “click”.
2. Test for positive engagement by tugging on the plug.
3. Disconnect the coupling by rotating sleeve “B” 1/8 turn in the clockwise direction as viewed from the female end of socket “A”.

| 30020 Series with steel Schrader couplings | 0 to 300 | 12 | 1. Insert plug fitting “C” into socket “A” and continue pushing until it is engaged as evidenced by a “click”.
2. Test for positive engagement by tugging on the plug.
3. Disconnect the coupling by rotating sleeve “B” 1/8 turn in the clockwise direction as viewed from the female end of socket “A”.

† The female connectors on all supply hose series are checked to stop the flow of air when they are disconnected. Both male and female connectors are checked on 26369 series supply hose.
§ "0" feet = direct connection to air supply source.
¶ Segments of supply hose are commonly available in 25 ft, 50 ft, 75 ft, and 100 ft length segments.

FIGURE 10
COUPLINGS USED ON SUPPLY HOSES

QUESTIONS OR CONCERNS
If you have any questions or concerns regarding use of this equipment, contact your authorized SCOTT dealer or distributor, or contact SCOTT at 1-800-247-7257 (or 704-291-8300 outside the continental United States) or visit our web site at www.scotthealthsafety.com.