

## NORTH 54001S

# Honeywell North 5400 Series Full Facepiece Respirator User Manual

Model: 54001S | Brand: NORTH

## 1. INTRODUCTION

The Honeywell North 5400 Series Full Facepiece Respirator is designed to provide comprehensive respiratory protection in various hazardous environments. This NIOSH-approved respirator offers excellent safety and versatility, protecting against particulates, dusts, fumes, mists, organic vapors, acid gases, and other contaminants. It is suitable for a wide range of applications including painting, welding, chemical handling, and general industrial use.

This manual provides essential information for the proper setup, operation, maintenance, and troubleshooting of your 5400 Series respirator to ensure optimal performance and user safety.

## 2. PRODUCT OVERVIEW AND COMPONENTS

The 5400 Series Full Facepiece Respirator is constructed with durable and comfortable materials, featuring a wide field of vision and a secure fit system.



**Figure 2.1:** Front view of the Honeywell North 5400 Series Full Facepiece Respirator. This image displays the complete respirator assembly, highlighting the clear polycarbonate lens, the central exhalation valve, and the side ports for cartridge attachment.

#### Safe Easy Breathing

Protects Against Particulates, Dusts, Fumes, Mists, Organic Vapors, Acid Gases & Other Contaminants

Full Range of Cartridge & Filter Options For A Wide Range Of Applications\*



\*Cartridges & Filters Sold Separately

**Figure 2.2:** The respirator shown with purple P100 filter cartridges attached. This illustrates how the respirator provides protection against particulates, dusts, fumes, mists, organic vapors, acid gases, and other contaminants when equipped with appropriate filters and cartridges (sold separately).

## Excellent Vision

Extra-Wide 200-Degree Field Of Vision

Downward View For Optimal Sight While Working

Tough Polycarbonate Lens  
Meets ANSI Z87 High Impact Standards



**Figure 2.3:** Close-up of the respirator's tough polycarbonate lens, emphasizing its extra-wide 200-degree field of vision and downward view for optimal sight. The lens meets ANSI Z87 High Impact Standards, eliminating the need for additional eye protection.

## Safe, Secure Fit

4-Point Head Strap Harness  
Ensures Secure Fit & Safe Seal

Textured Nose Cup  
Reduces Slippage

Threaded Cartridge Connector  
Prevents Accidental  
Disconnections



**Figure 2.4:** Rear view of the respirator highlighting the 4-point head strap harness for a secure fit and seal, the textured nose cup to reduce slippage, and the threaded cartridge connector designed to prevent accidental disconnections.

### Longwearing Comfort

Soft, Latex-Free Thermoplastic Elastomer Material

Wide Sealing Area  
Designed To Fit Most  
Face Shapes & Sizes



**Figure 2.5:** Internal view of the respirator demonstrating its longwearing comfort features, including the soft, latex-free thermoplastic elastomer material and the wide sealing area designed to fit a variety of facial types.



### Ultimate Versatility

Easily Converts To PAPR or  
CF-SAR Usage\*



### Welding Adaptor Available

Offers Flexibility To Meet  
Various Workplace Needs\*

\*Welding Adaptor & PAPR/CF-SAR  
Attachments Sold Separately

**Figure 2.6:** Illustrations of the respirator's ultimate versatility, showing its easy conversion to Powered Air Purifying Respirator (PAPR) or Continuous Flow Supplied Air Respirator (CF-SAR) usage, and the availability of a welding adaptor. These attachments are sold separately.



**Figure 2.7:** An image highlighting the NIOSH approval and various applications for the respirator, including abatement, remediation, painting, coating, welding, grinding, oil & gas, heavy metal fabrication, and mining. It also notes its suitability for pandemic protection with appropriate filters and cartridges.

### 3. SAFETY INFORMATION

- **NIOSH Approval:** This respirator is NIOSH-approved. Always ensure you are using the correct cartridges and filters for the specific contaminants present in your work environment.
- **Fit Testing:** A proper fit is crucial for effective protection. Conduct a fit test (qualitative or quantitative) before initial use and periodically thereafter, as per OSHA regulations or local safety standards.
- **User Seal Check:** Perform a positive and negative pressure user seal check each time the respirator is donned. Refer to Section 4.2 for detailed instructions.
- **Limitations:** Do not use this respirator in atmospheres containing less than 19.5% oxygen, in atmospheres immediately dangerous to life or health (IDLH), or for escape from IDLH atmospheres.
- **Maintenance:** Regularly inspect and maintain your respirator as described in Section 6 to ensure its continued effectiveness. Replace damaged or worn components immediately.
- **Storage:** Store the respirator in a clean, dry place away from contaminated areas, extreme temperatures, and direct sunlight.

### 4. SETUP

#### 4.1 Attaching Cartridges/Filters

1. Identify the correct cartridges or filters for your application. Ensure they are compatible with the 5400 Series respirator.

2. Align the threaded connector of the cartridge/filter with the corresponding port on the facepiece.
3. Twist the cartridge/filter clockwise until it is securely seated. Do not overtighten. The threaded connection is designed to prevent accidental disconnection.
4. Repeat for the other side if using two cartridges.

## 4.2 Donning the Respirator and User Seal Check

1. Hold the respirator by the facepiece with the head straps dangling.
2. Place your chin into the chin cup and pull the head harness over your head.
3. Adjust the 4-point head strap harness (refer to Figure 2.4) by pulling the lower straps first, then the upper straps, until the respirator fits snugly and comfortably on your face. Ensure the sealing area is flush against your skin.
4. **Positive Pressure Seal Check:** Close off the exhalation valve with the palm of your hand. Exhale gently. The facepiece should bulge slightly, and no air should leak from the seal. If air leaks, readjust the straps and repeat the check.
5. **Negative Pressure Seal Check:** Close off the inlets of the cartridges/filters with the palms of your hands. Inhale gently. The facepiece should collapse slightly against your face, and no air should leak from the seal. If air leaks, readjust the straps and repeat the check.
6. If you cannot achieve a proper seal, do not enter the contaminated area. Consult your supervisor or safety officer.

## 5. OPERATING THE RESPIRATOR

Once properly donned and sealed, the respirator provides continuous protection. The wide polycarbonate lens (Figure 2.3) offers an excellent field of vision, including a downward view, which is critical for tasks requiring attention to detail at your feet.

- Breathe normally while wearing the respirator. The design allows for comfortable breathing during extended periods of use.
- Monitor your breathing and comfort. If you experience difficulty breathing, dizziness, or detect any odor or taste of contaminants, immediately leave the contaminated area and check your respirator.
- The respirator can be configured as an Air Purifying Respirator (APR), Powered Air Purifying Respirator (PAPR), or Continuous Flow Supplied Air Respirator (CF-SAR) with appropriate accessories (Figure 2.6). Follow specific instructions for these configurations if applicable.

## 6. MAINTENANCE

### 6.1 Cleaning and Disinfection

1. Remove cartridges/filters. Discard used cartridges/filters according to local regulations.
2. Wash the facepiece and other reusable components (excluding cartridges/filters) in warm water (max 120°F / 49°C) with a mild detergent or a respirator cleaning solution.
3. Use a soft brush to gently scrub all surfaces. Pay attention to crevices and valve areas.

- 4. Rinse thoroughly with clean, warm water to remove all detergent residue.
- 5. Disinfect by immersing the components in a solution of germicidal cleaner or a solution of 2 tablespoons of bleach per gallon of water for 2 minutes.
- 6. Rinse again with clean, warm water.
- 7. Air dry in a clean, non-contaminated area or wipe dry with a clean, lint-free cloth.

6.2 Inspection

Inspect the respirator before and after each use:

- **Facepiece:** Check for cracks, tears, holes, or distortion. Ensure the sealing area is smooth and flexible.
- **Lens:** Inspect for scratches, cracks, or haziness that could impair vision.
- **Head Straps:** Check for tears, breaks, loss of elasticity, or damaged buckles.
- **Valves:** Ensure inhalation and exhalation valves are clean, pliable, and not cracked, torn, or missing.
- **Cartridge Connectors:** Verify that threads are not stripped or damaged.

Replace any damaged or worn parts immediately using genuine Honeywell North replacement parts.

6.3 Storage

Store the cleaned and inspected respirator in a sealed bag or container, away from dust, chemicals, extreme temperatures, and direct sunlight. This helps protect the respirator from damage and contamination.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Air leakage around face seal	Improper fit, damaged facepiece, facial hair, incorrect size	Readjust straps, perform user seal check. Inspect facepiece for damage. Ensure clean-shaven face. Verify correct respirator size.
Difficulty breathing	Clogged filters/cartridges, damaged valves	Replace filters/cartridges. Inspect inhalation/exhalation valves for damage or debris.
Lens fogging	Improper seal, high humidity, lack of anti-fog treatment	Ensure proper seal. Apply anti-fog solution to lens.
Detection of contaminant odor/taste	Cartridges/filters exhausted, improper seal, wrong cartridge type	Immediately leave contaminated area. Replace cartridges/filters. Re-check seal. Verify correct cartridge type for hazard.
Discomfort or pressure points	Improper strap adjustment, incorrect size	Readjust head straps evenly. Ensure correct respirator size for your face.

8. SPECIFICATIONS

**Model Number:** 54001S

**Product Dimensions:** 8.4 x 11.2 x 6.7 inches

**Item Weight:** 1.6 pounds

**Material:** Thermoplastic Elastomer (TPE) facepiece, Polycarbonate lens

**Color:** Black

**NIOSH Approval:** Yes

**Lens Standard:** ANSI Z87 High Impact

**Compatibility:** Compatible with North cartridges, filters, and cartridge/filter combinations. Convertible to PAPR or CF-SAR with appropriate accessories.

**Manufacturer:** Honeywell



**Date First Available:** August 22, 2010

9. WARRANTY AND SUPPORT

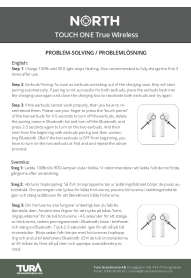

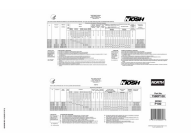
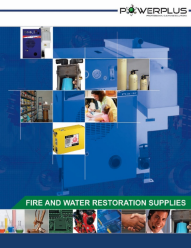
For warranty information, technical support, or to purchase replacement parts and accessories, please contact Honeywell customer service or visit the official Honeywell safety products website. Keep your purchase receipt as proof of purchase.

Honeywell is committed to providing high-quality personal protective equipment and support for its products.

Related Documents - 54001S

	<p><a href="#">North Touch Two (HC-EP06) User Manual: True Wireless Stereo Bluetooth Earphones</a></p> <p>Comprehensive user manual for the North Touch Two (HC-EP06) True Wireless Stereo Bluetooth Earphones, covering specifications, pairing, functions, and troubleshooting.</p>
	<p><a href="#">BLADELESS AIR FRYER User Manual - Features, Settings, and Troubleshooting</a></p> <p>Comprehensive user manual for the BLADELESS AIR FRYER. Learn about its features, control panel, preset menus, cooking settings, tips for home-made fries, cleaning, storage, and troubleshooting common issues. Includes safety guidelines and specifications.</p>



	<p><a href="#">NORTH TOUCH ONE True Wireless Troubleshooting Guide</a></p> <p>Find solutions to common issues with your NORTH TOUCH ONE True Wireless earbuds. Learn how to pair, reset, and troubleshoot your device.</p>
	<p><a href="#">North Sonar Foil System Rider Guide V4: Components &amp; Setup</a></p> <p>Comprehensive guide to the North Sonar Foil System, detailing components like wings, masts, and boards for wing foiling, kite foiling, surf, and more. Learn setup and selection for all rider levels.</p>
	<p><a href="#">North Safety Products 7580P100 NIOSH Approved Respirator Filter Configurations</a></p> <p>This document details the NIOSH-approved configurations for North Safety Products' 7580P100 respirator filters, including model numbers, protection levels, filter types, and associated respirator components. It also outlines important usage cautions and limitations.</p>
	<p><a href="#">PowerPlus Fire and Water Restoration Supplies Catalog   Safety &amp; PPE Equipment</a></p> <p>Explore the comprehensive PowerPlus catalog featuring essential safety and personal protective equipment (PPE) for fire and water restoration. Find respirators, protective clothing, gloves, boots, and more from leading brands like 3M, DuPont, and Kimberly-Clark.</p>