

3M™ Air-Mate™ Powered Air Purifying Respirator (PAPR)

Headgear

Head Cover
BE-12 Series



BE-12-3 White Reg
BE-12-50 White Reg
BE-12L-3 White Lg*
BE-12L-50 White Lg*

Hood
BE-10 Series



BE-10-3 White Reg
BE-10-20 White Reg
BE-10L-3 White Lg

Breathing Tube



BE-224

HEPA PAPR Assembly



AMH-1U
Discontinued

AMH-1U Includes:

- Air-Mate™ PAPR Unit 520-03-63R01
- Battery Pack 007-00-15R01
- HE Filter 451-02-01R01
- Airflow Indicator 021-14-00R01
- Vinyl Belt GVP-117
- External Charging Adapter 520-04-24
- Breathing Tube BE-224
- Breathing Tube Cover W-3228-10
- Smart Battery Charger 520-03-73



231-01-30


231-01-30 Includes:

- Air-Mate™ PAPR Unit 520-03-63R01
- Battery-Pack 007-00-15R01
- HE Filter 451-02-01R01
- Waist Belt Nylon 021-41-02R01
- Airflow Indicator 021-14-00R01

231-01-30U Includes:

All components of the 231-01-30 except nylon belt replaced with easy clean vinyl belt GVP-117.

AMH-12U Kit



AMH-12U
Discontinued

AMH-12U Includes:

- Air-Mate™ PAPR Assembly 231-01-30U
- Head Cover BE-12-3, Regular, White
- Smart Battery Charger 520-03-73
- External Charging Adapter 520-04-24
- Breathing Tube BE-224
- Breathing Tube Cover W-3228-10
- Storage Bag

Note: Storage bag comes with kit and is not sold separately.

Battery Charger



520-03-73
Single Battery Charger



520-03-72
Five Battery Charger



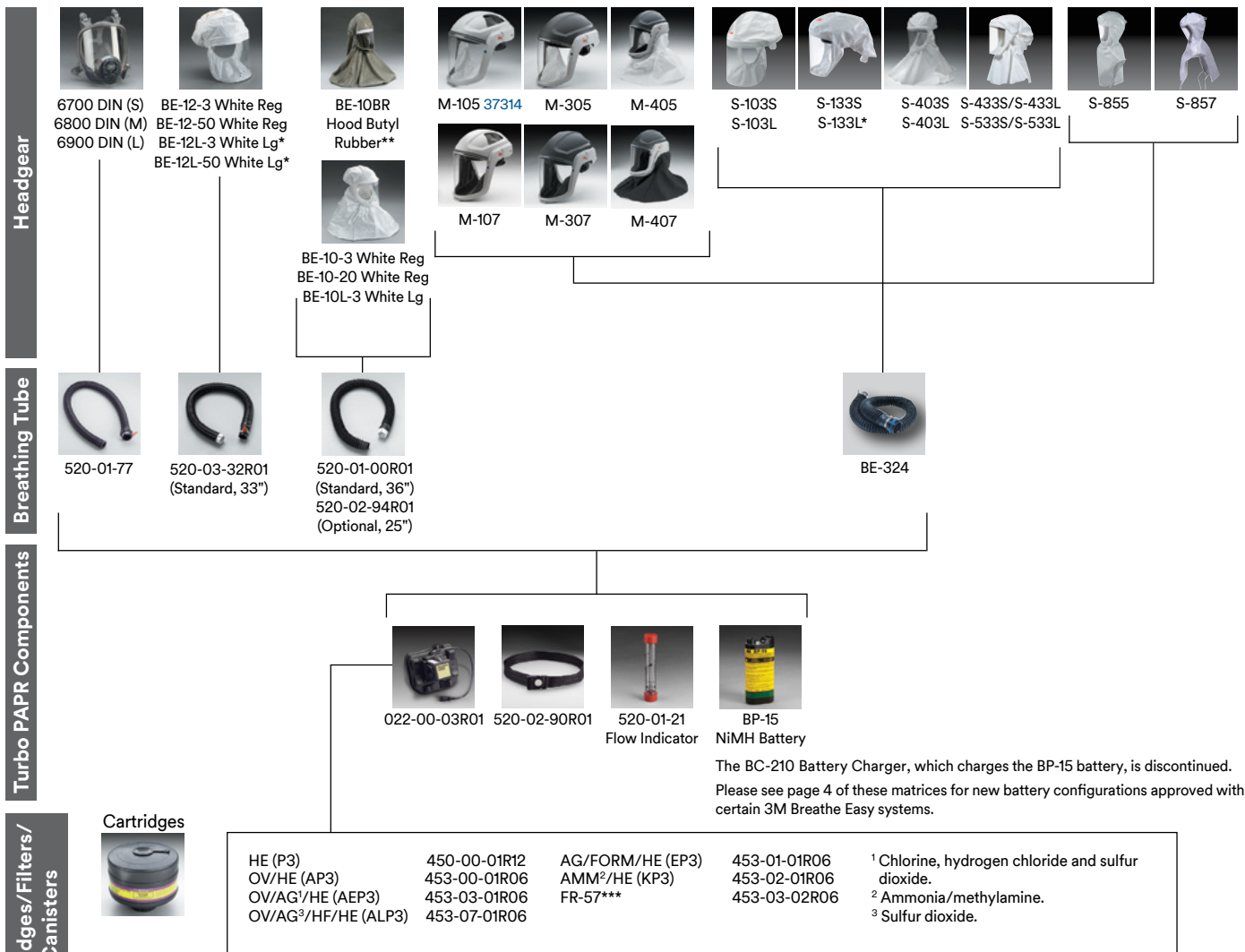
520-04-24
External Battery Charger
Assembly

*Large size comes with removable blue tissue covering the visor.

**Please note: Effective January 1, 2017, the AMH-1U and AMH-12U kits will no longer be available for sale in California or Oregon due to a change in battery charger regulations that affect the 520-03-73 charger contained within these kits.

***Please note: Effective January 1, 2017, the 520-03-72 and 520-03-73 chargers will no longer be available for sale in California or Oregon due to a change in battery charger regulations that affect those states.

3M™ Breathe Easy™ Powered Air Purifying Respirator (PAPR) with NiMH BP-15 Battery



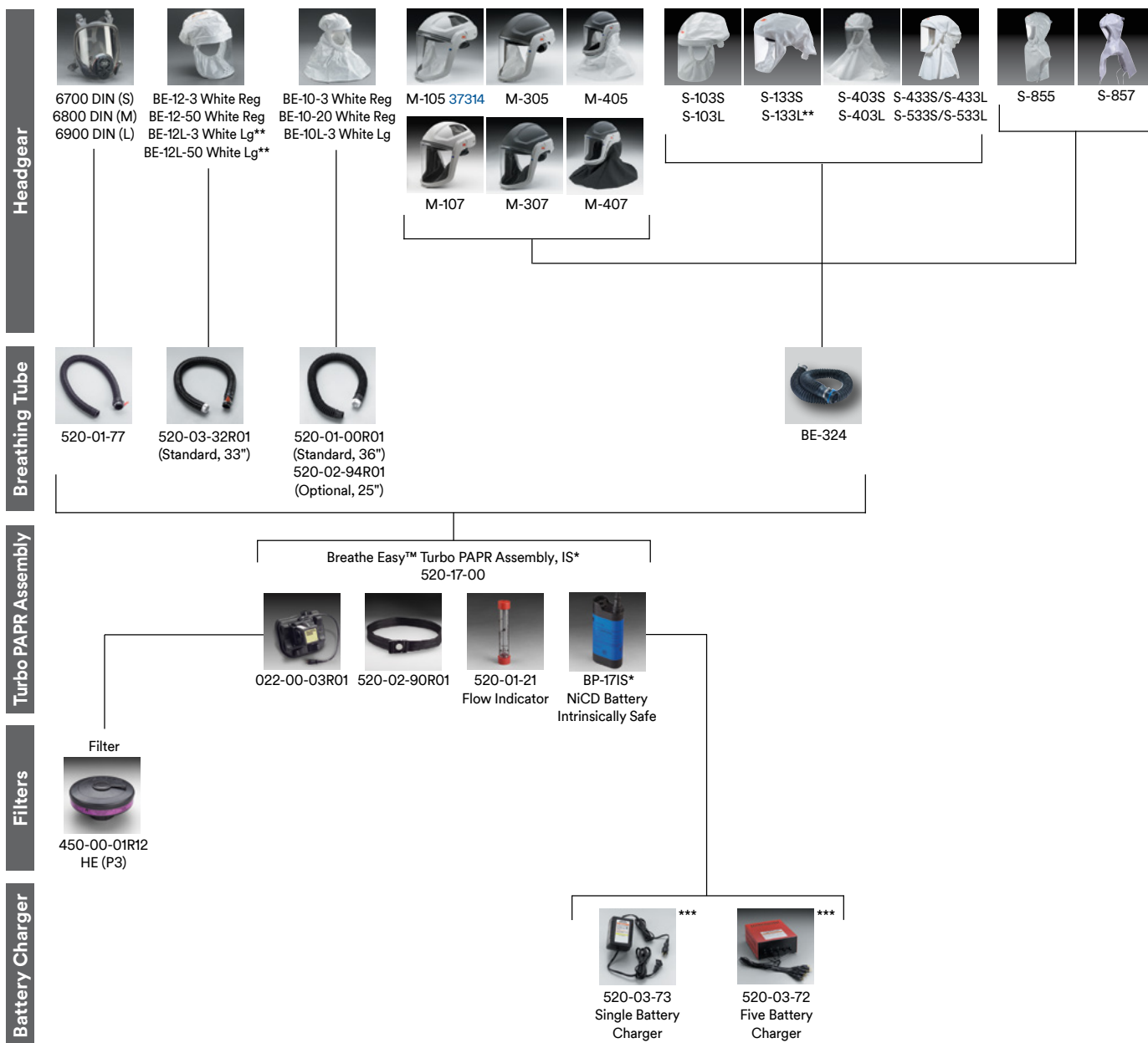
Footnotes:

- *Large and Medium/Large sizes come with removable blue tissue or film covering the visor.
- **BE-10BR Approved with FR-57, AP3 and AEP3 ONLY
- ***FR-57 approved with BE-10 series, 6000 series and select S-Series hoods ONLY.

3M™ Breathe Easy™

Powered Air Purifying Respirator (PAPR)

with BP-17IS NiCD Battery (Intrinsically Safe)*



Footnotes:

*The Breathe Easy™ Turbo PAPR with BP-17IS battery pack has been tested and classified for intrinsic safety ("Exia") by Underwriters Laboratory (UL 913 5th Edition). See User Instructions for details.

**Large and Medium/Large sizes come with removable blue tissue or film covering the visor.

***Please note: Effective January 1, 2017, the 520-03-72 and 520-03-73 chargers will no longer be available for sale in California or Oregon due to a change in battery charger regulations that affect those states.

3M™ Breathe Easy™

Powered Air Purifying Respirator (PAPR)

With TR-630 Lithium-Ion Battery (non-CBRN)

Headgear

Breathing Tube

Turbo PAPR Assembly

Cartridges/Filters/
Canisters



Butyl Rubber
BE-10BR



BE-10-3 White Reg
BE-10-20 White Reg
BE-10L-3 White Lg



S-403S
S-403L



520-01-00R01
(Standard, 36")
520-02-94R01
(Optional, 25")



RBE-BTH



520-01-00R01
(Standard, 36")
520-02-94R01
(Optional, 25")



BE-324



022-00-03R01



520-01-21
Flow Indicator



520-02-90R01*



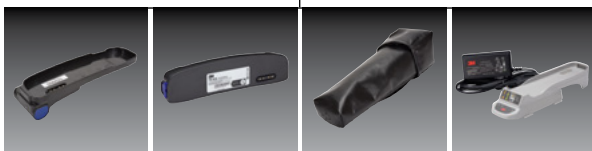
022-00-03R01



520-01-21
Flow Indicator



520-02-90R01*



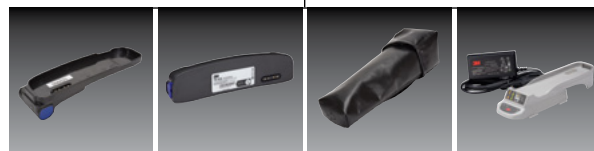
TR-659 Battery Adapter TR-630 Standard Battery TR-657 Easy Clean Holster TR-641N Single Station Battery Charger

RBE-600 Upgrade Kit

- TR-659 Battery Adapter
- TR-630 Standard Battery
- TR-657 Easy Clean Holster
- TR-641N Single Station Battery Charger



RBE-600 Upgrade Kit components also sold separately



TR-659 Battery Adapter TR-630 Standard Battery TR-657 Easy Clean Holster TR-641N Single Station Battery Charger

RBE-600 Upgrade Kit

- TR-659 Battery Adapter
- TR-630 Standard Battery
- TR-657 Easy Clean Holster
- TR-641N Single Station Battery Charger



RBE-600 Upgrade Kit components also sold separately



FR-57
453-03-02R06



HE (P3)
450-00-01R12



FR-57
453-03-02R06

Footnotes:

*See NIOSH Approval Label for additional belt options.

3M™ Breathe Easy™ Powered Air Purifying Respirator (PAPR) CBRN First Receiver System

Headgear/Breathing Tube

Hoods
BE-10 Series



Butyl Rubber
BE-10BR



RBE-BTH

Turbo PAPR Assembly

Non-Rechargeable



022-00-03R01



RBE-BLT



520-01-21
Flow Indicator



520-04-57R01
Lithium
Non-rechargeable

Rechargeable NiMH



022-00-03R01



RBE-BLT



520-01-21
Flow Indicator



BP-15
NiMH Battery

Note: the BP-15 Battery is available. The BC-210 Battery Charger, which charges the BP-15 battery, is discontinued.

Rechargeable Li-Ion



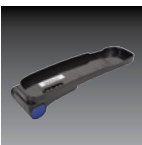
022-00-03R01



RBE-BLT



520-01-21
Flow Indicator



TR-659
Battery Adapter



TR-630
Standard Battery



TR-657
Easy Clean
Holster



TR-641N
Single Station
Battery Charger

Cartridges/Filters/
Canisters

Cartridges



RBE-57

RBE-600 Upgrade Kit

- TR-659 Battery Adapter
- TR-630 Standard Battery
- TR-657 Easy Clean Holster
- TR-641N Single Station Battery Charger



RBE-600 Upgrade Kit components also sold separately

Systems



RBE-L10
System



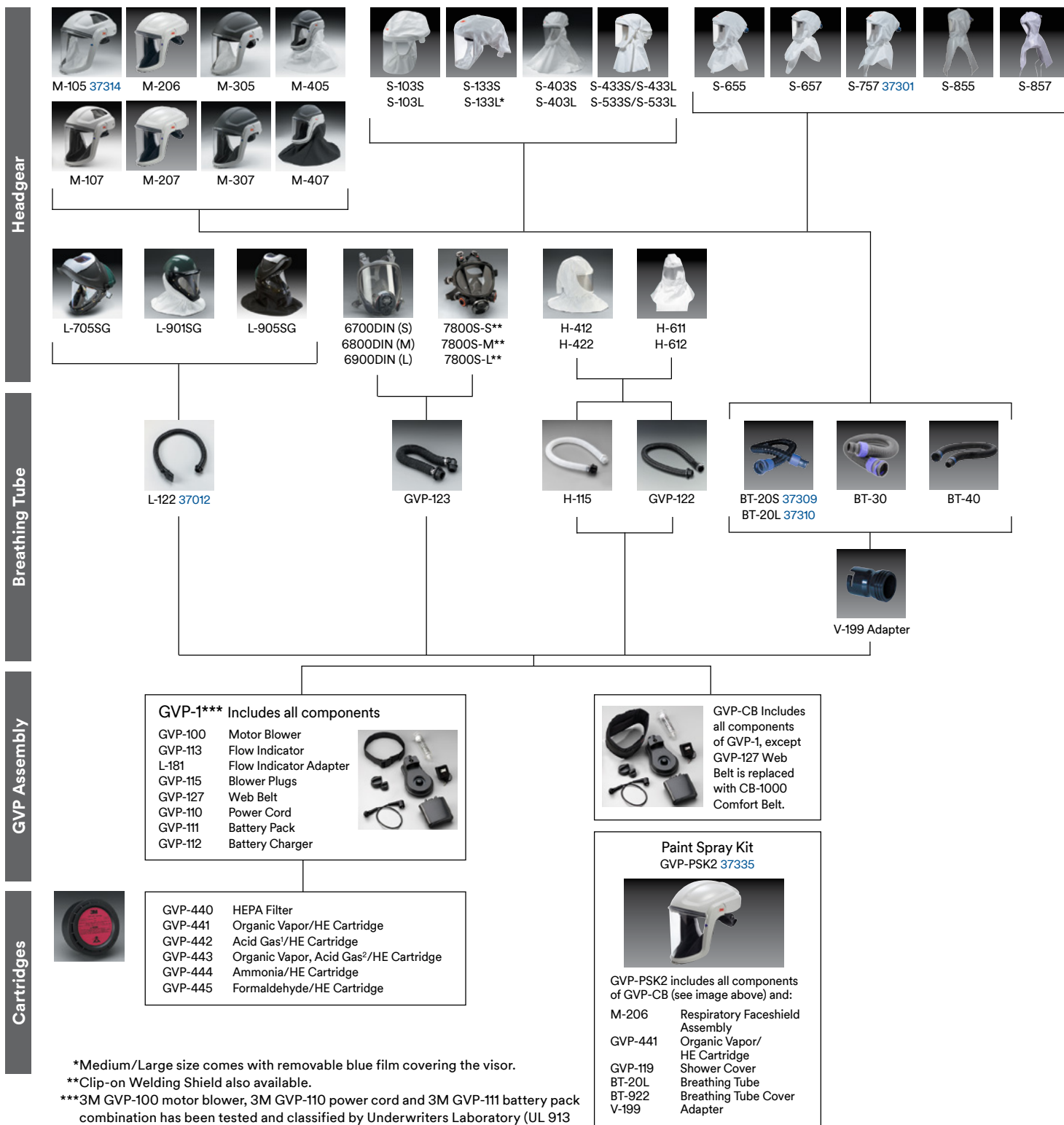
RBE-NM10
System*



RBE-10BR
System

*The battery included with this system, BP-15, is still available but the BC-210 Charger, which charges the BP-15 Battery, is no longer available.

3M™ GVP Powered Air Purifying Respirator (PAPR)



*Medium/Large size comes with removable blue film covering the visor.

**Clip-on Welding Shield also available.

***3M GVP-100 motor blower, 3M GVP-110 power cord and 3M GVP-111 battery pack combination has been tested and classified by Underwriters Laboratory (UL 913 5th Edition) for intrinsic safety: See User Instructions for additional information.

OV = NIOSH approval: Certain organic vapors.

AG¹ = NIOSH approval: Chlorine, hydrogen chloride, sulfur dioxide, chlorine dioxide or hydrogen fluoride.

AG² = NIOSH approval: Chlorine, hydrogen chloride, sulfur dioxide, chlorine dioxide, hydrogen fluoride and hydrogen sulfide.

3M™ GVP

Powered Air Purifying Respirator (PAPR)

with TR-630 Lithium-Ion Battery

Headgear



M-305



M-307



M-405



M-407



L-901SG



L-905SG

Breathing Tube



BT-20S 37309
BT-20L 37310



BT-30



BT-40



V-199 Adapter



L-122 37012

GVP Assembly

GVP-614-SK Smelting Kit



- GVP-100 Motor Blower
- TR-659 Battery Adapter
- GVP-610 Power Cord
- TR-656 Heavy Duty Holster
- TR-630 Standard Battery
- TR-641N Single Station Battery Charger
- TR-326 High Durability Leather Belt
- BT-40 Versaflo Heavy Duty Breathing Tube
- V-199 Adapter
- GVP-443 Organic Vapor, Acid Gas/HE Cartridge
- GVP-113 Flow Indicator

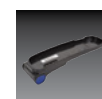
For customers with existing GVP systems

GVP-600 Upgrade Kit

- TR-659 Battery Adapter
- GVP-610 Power Cord
- TR-656 Heavy Duty Holster
- TR-630 Standard Battery
- TR-641N Single Station Battery Charger



GVP-100
Motor Blower



TR-659
Battery Adapter



GVP-610
Power Cord



TR-656
Heavy Duty Holster



TR-630
Standard Battery



TR-326
High Durability
Leather Belt



GVP-113
Flow Indicator



L-181
Flow Indicator
Adapter



TR-641N
Single Station
Battery Charger



TR-644N
Four Station
Battery Charger

Battery Chargers / Cartridges

Cartridges

- GVP-440 HEPA Filter
- GVP-441 Organic Vapor/HE Cartridge
- GVP-442 Acid Gas/HE Cartridge
- GVP-443 Organic Vapor, Acid Gas²/HE Cartridge
- GVP-444 Ammonia/HE Cartridge
- GVP-445 Formaldehyde/HE Cartridge

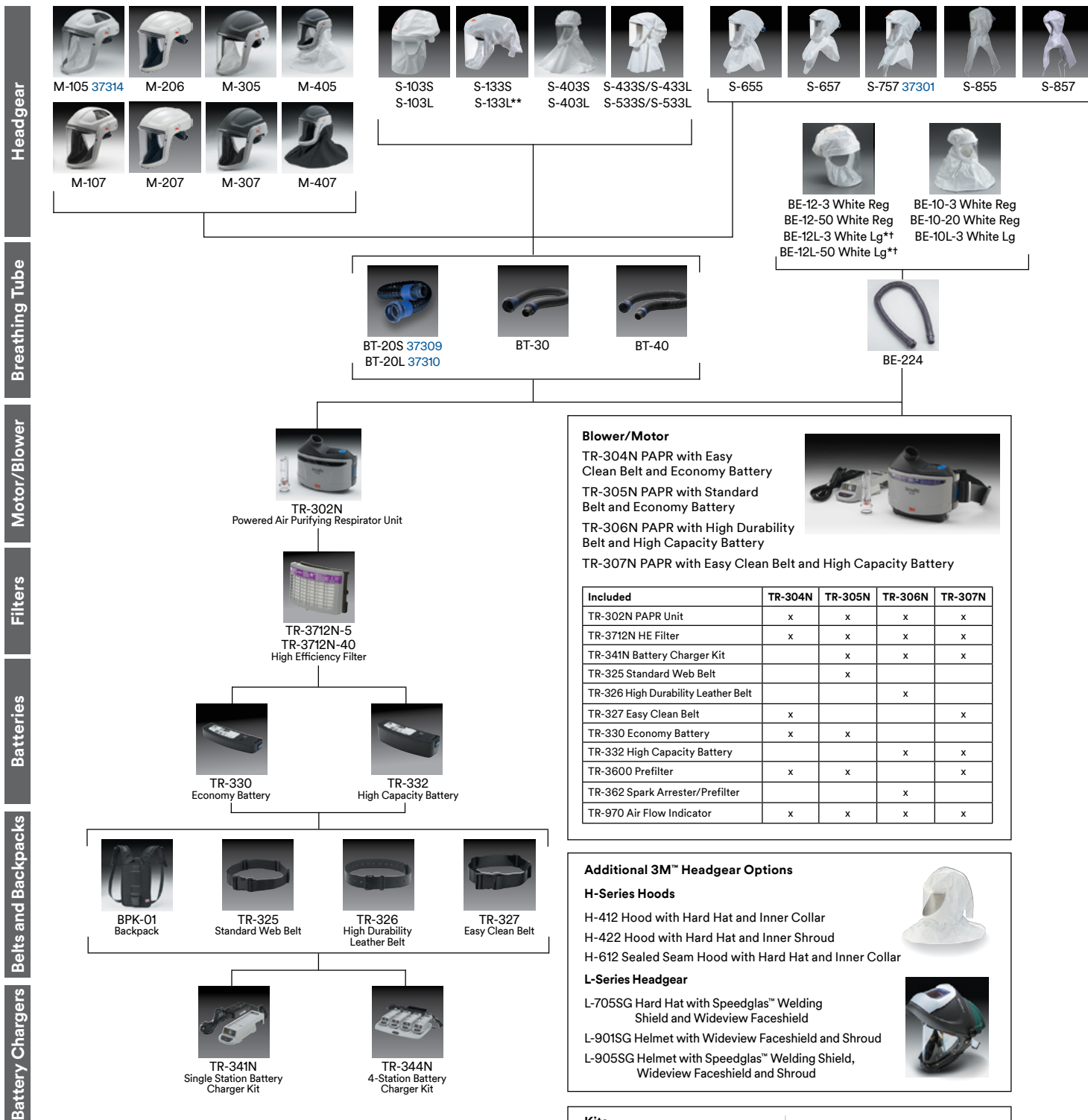


OV = NIOSH approval: Certain organic vapors.

AG¹ = NIOSH approval: Chlorine, hydrogen chloride, sulfur dioxide, chlorine dioxide or hydrogen fluoride.

AG² = NIOSH approval: Chlorine, hydrogen chloride, sulfur dioxide, chlorine dioxide, hydrogen fluoride and hydrogen sulfide.

3M™ Versaflo™ TR-300* Powered Air Purifying Respirator (PAPR)



*Operating Altitude approx. sea level to 2,600 ft. (800m). For altitudes above 2,600 ft., consider the 3M™ Versaflo™ TR-600 Series PAPR.

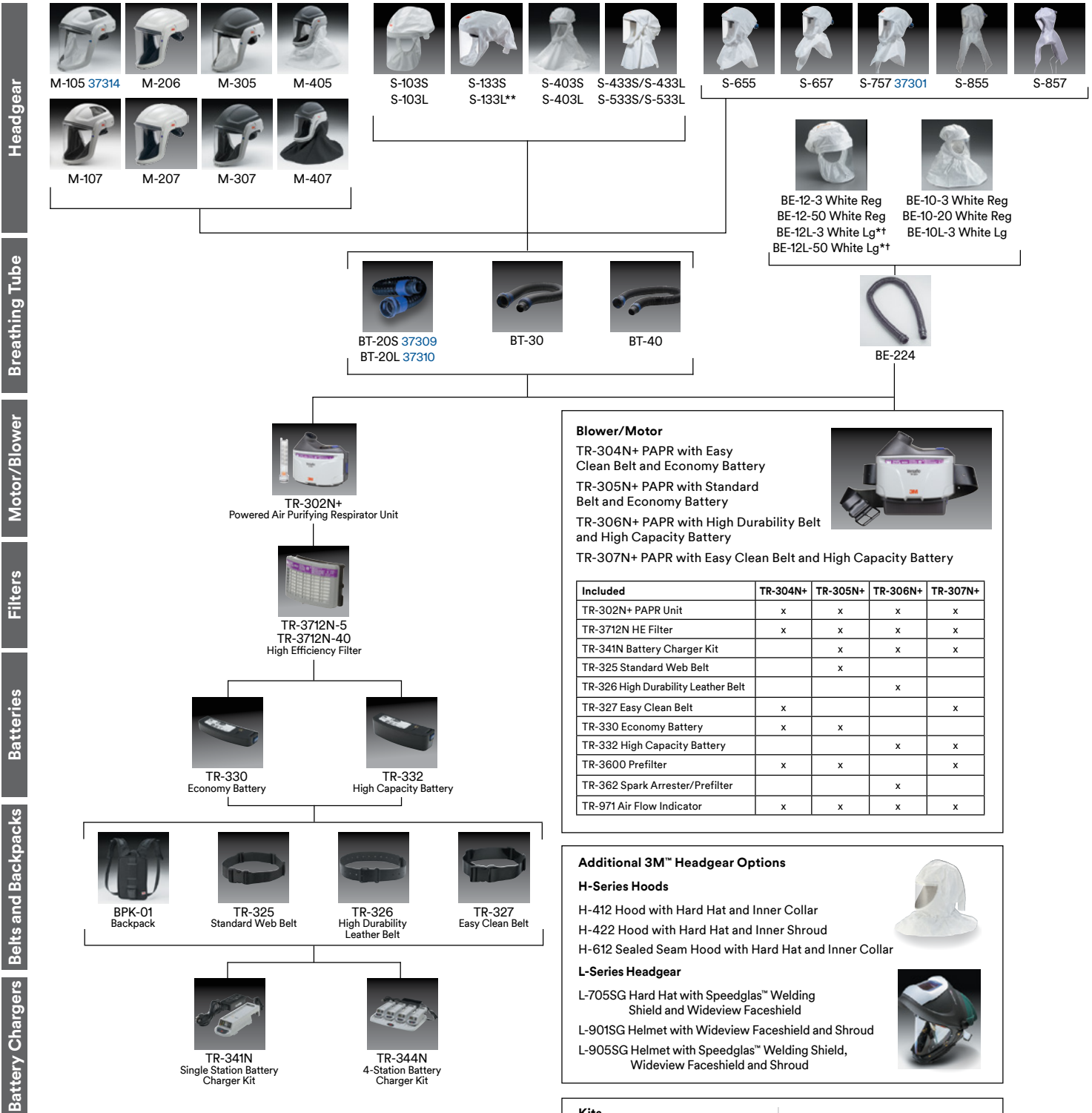
**Medium/Large size comes with removable blue film covering the visor.

†Large size comes with removable blue film covering the visor.

3M Automotive Aftermarket Division (AAD) product numbers are found in blue type on select products.

3M™ Versaflo™ TR-300+*

Powered Air Purifying Respirator (PAPR)



Blower/Motor

TR-304N+ PAPR with Easy Clean Belt and Economy Battery
 TR-305N+ PAPR with Standard Belt and Economy Battery
 TR-306N+ PAPR with High Durability Belt and High Capacity Battery
 TR-307N+ PAPR with Easy Clean Belt and High Capacity Battery

Included	TR-304N+	TR-305N+	TR-306N+	TR-307N+
TR-302N+ PAPR Unit	x	x	x	x
TR-3712N HE Filter	x	x	x	x
TR-341N Battery Charger Kit		x	x	x
TR-325 Standard Web Belt		x		
TR-326 High Durability Leather Belt			x	
TR-327 Easy Clean Belt	x			x
TR-330 Economy Battery	x	x		
TR-332 High Capacity Battery			x	x
TR-3600 Prefilter	x	x		x
TR-362 Spark Arrester/Prefilter			x	
TR-971 Air Flow Indicator	x	x	x	x

Additional 3M™ Headgear Options

H-Series Hoods

- H-412 Hood with Hard Hat and Inner Collar
- H-422 Hood with Hard Hat and Inner Shroud
- H-612 Sealed Seam Hood with Hard Hat and Inner Collar

L-Series Headgear

- L-705SG Hard Hat with Speedglas™ Welding Shield and Wideview Faceshield
- L-901SG Helmet with Wideview Faceshield and Shroud
- L-905SG Helmet with Speedglas™ Welding Shield, Wideview Faceshield and Shroud

Kits

TR-300N+ ECK Easy Clean Kit

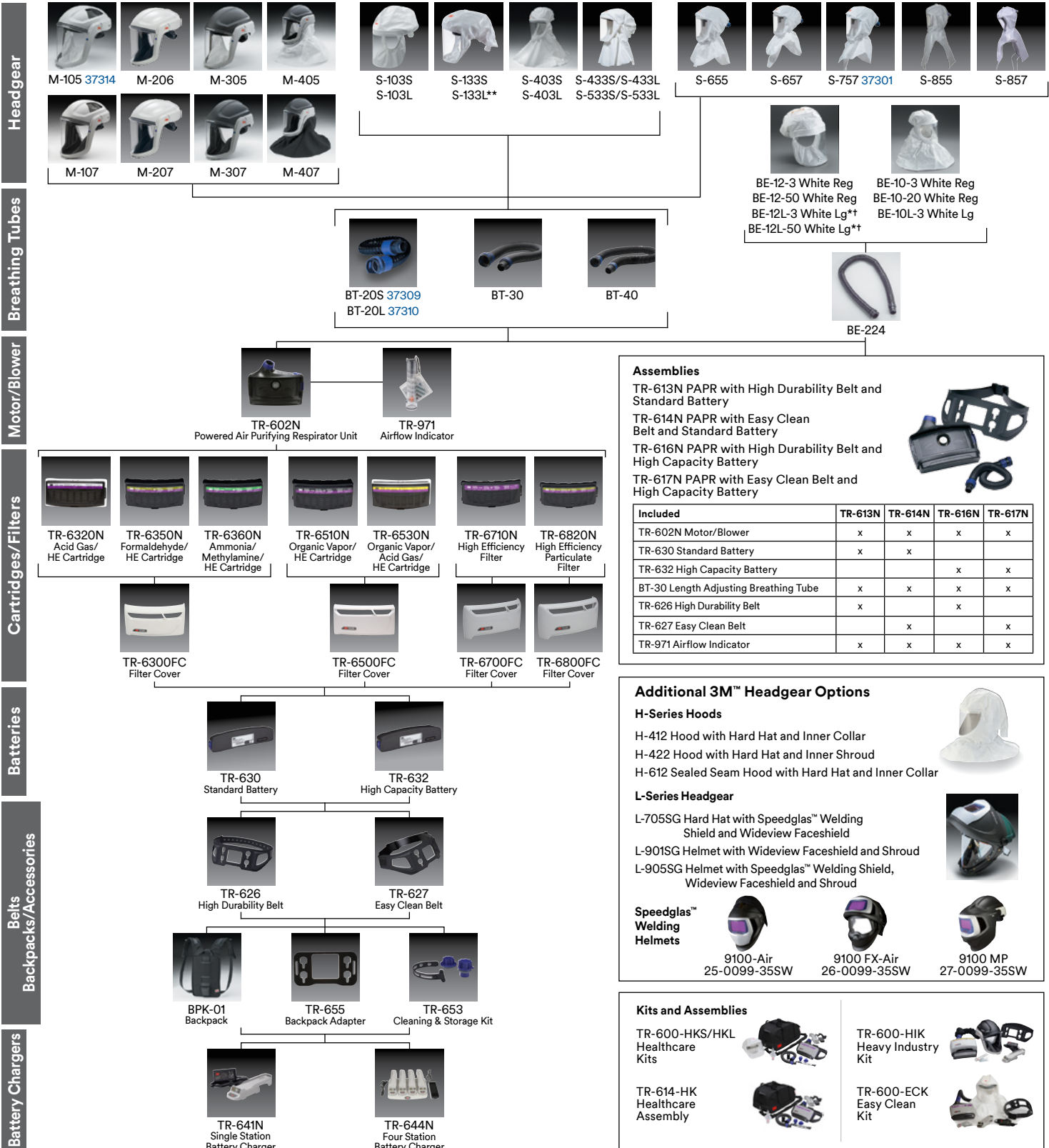
TR-300N+ HIK Heavy Industry Kit

TR-300N+ HKS/HKL Healthcare Kits

*Operating Altitude -100m (-328 ft) to 4300m (14,107 ft).
 **Medium/Large size comes with removable blue film covering the visor.
 †Large size comes with removable blue film covering the visor.

3M Automotive Aftermarket Division (AAD) product numbers are found in blue type on select products.

3M™ Versaflo™ TR-600* Powered Air Purifying Respirator (PAPR)



Assemblies

- TR-613N PAPR with High Durability Belt and Standard Battery
- TR-614N PAPR with Easy Clean Belt and Standard Battery
- TR-616N PAPR with High Durability Belt and High Capacity Battery
- TR-617N PAPR with Easy Clean Belt and High Capacity Battery



Included	TR-613N	TR-614N	TR-616N	TR-617N
TR-602N Motor/Blower	x	x	x	x
TR-630 Standard Battery	x	x		
TR-632 High Capacity Battery			x	x
BT-30 Length Adjusting Breathing Tube	x	x	x	x
TR-626 High Durability Belt	x		x	
TR-627 Easy Clean Belt		x		x
TR-971 Airflow Indicator	x	x	x	x

Additional 3M™ Headgear Options

H-Series Hoods

- H-412 Hood with Hard Hat and Inner Collar
- H-422 Hood with Hard Hat and Inner Shroud
- H-612 Sealed Seam Hood with Hard Hat and Inner Collar



L-Series Headgear

- L-705SG Hard Hat with Speedglas™ Welding Shield and Wideview Faceshield
- L-901SG Helmet with Wideview Faceshield and Shroud
- L-905SG Helmet with Speedglas™ Welding Shield, Wideview Faceshield and Shroud



Speedglas™ Welding Helmets

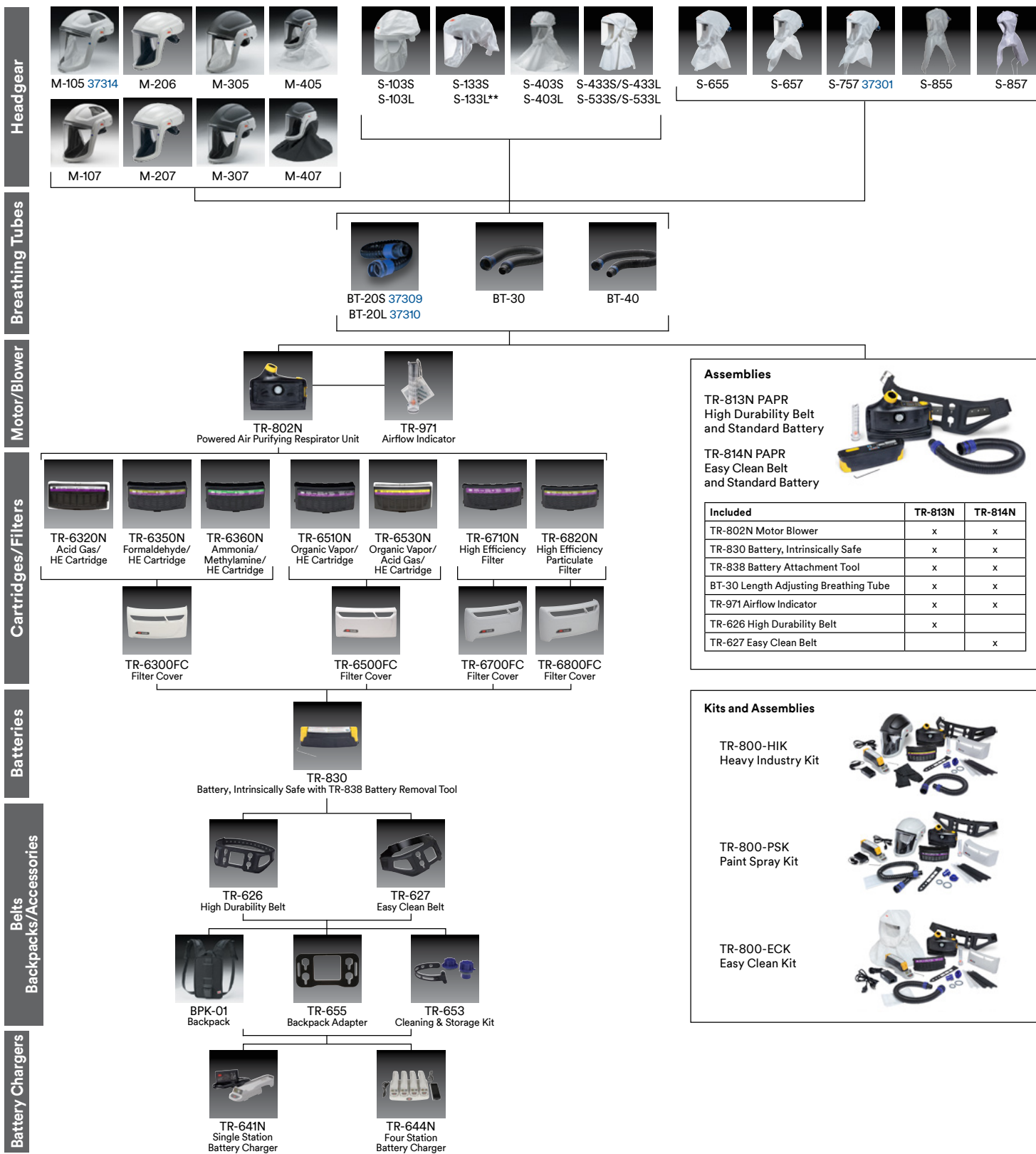
- 9100-Air 25-0099-35SW
- 9100 FX-Air 26-0099-35SW
- 9100 MP 27-0099-35SW

Kits and Assemblies

- TR-600-HKS/HKL Healthcare Kits
- TR-600-HIK Heavy Industry Kit
- TR-614-HK Healthcare Assembly
- TR-600-ECK Easy Clean Kit

*Operating Altitude -328 to 16,404 ft. **Medium/Large size comes with removable blue film covering the visor. †Large size comes with removable blue film covering the visor.
3M Automotive Aftermarket Division (AAD) product numbers are found in blue type on select products.

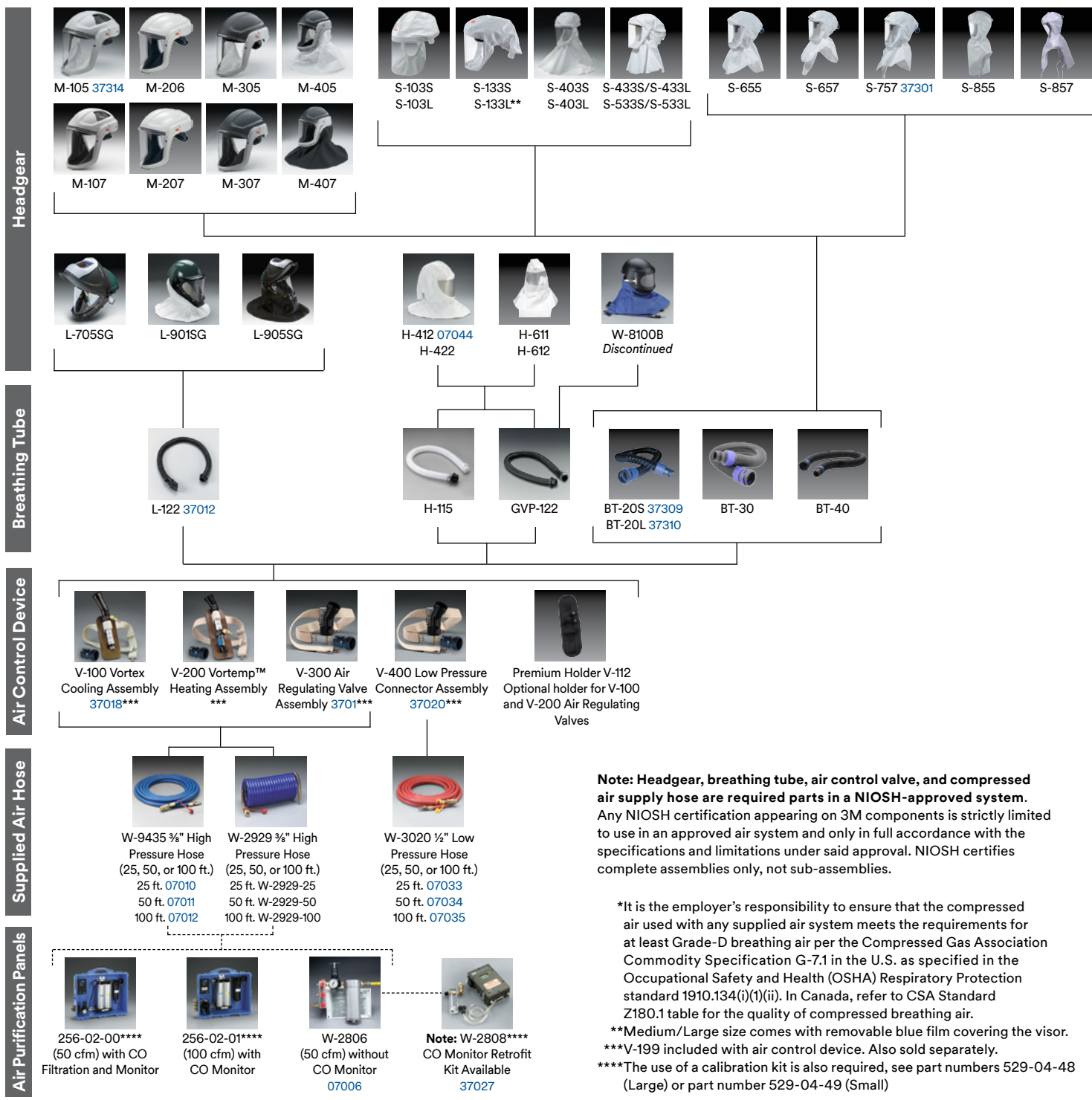
3M™ Versaflo™ TR-800* Powered Air Purifying Respirator (PAPR)



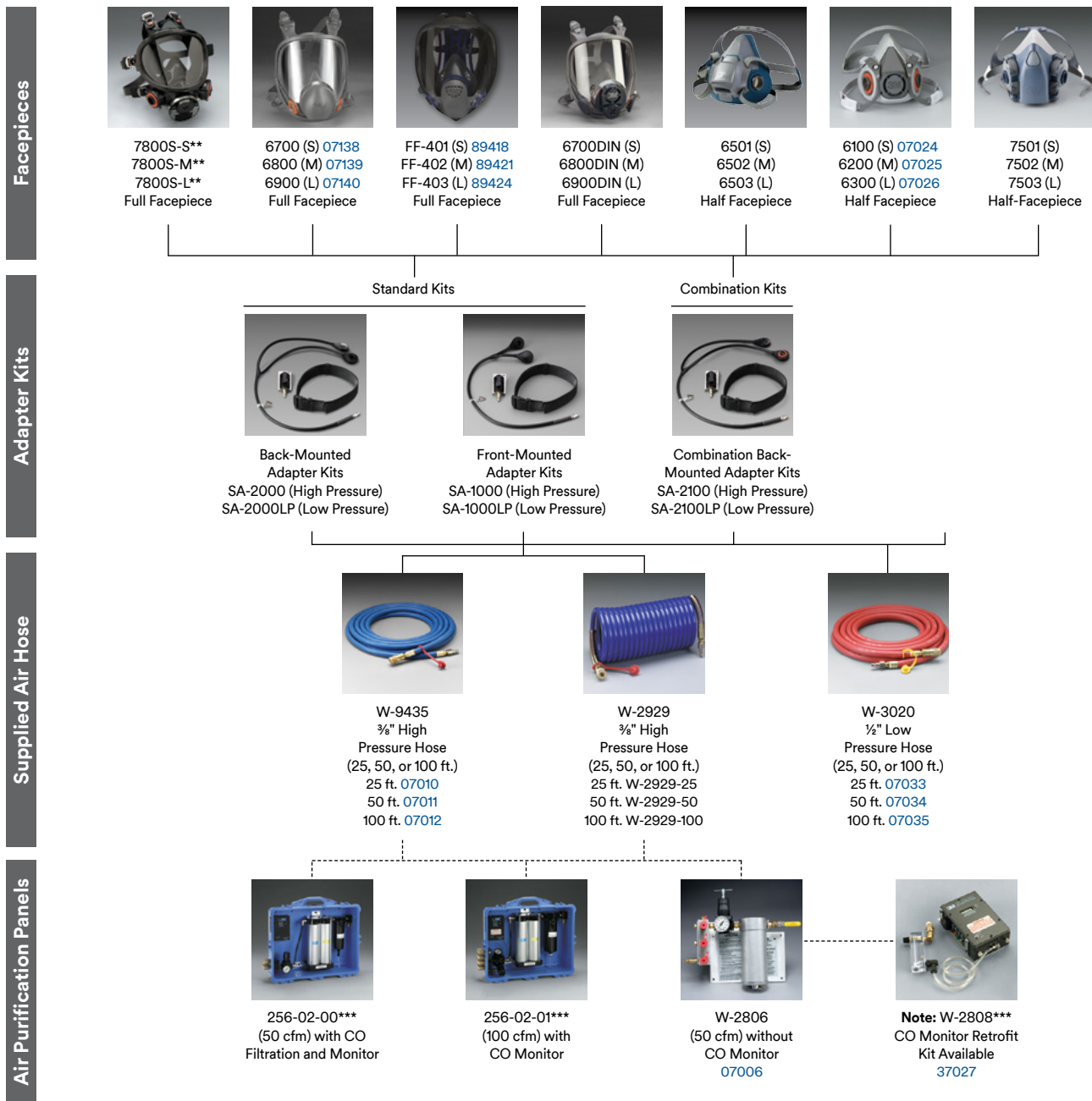
*Operating Altitude -328 to 16,404 ft. **Medium/Large size comes with removable blue film covering the visor.

3M Automotive Aftermarket Division (AAD) product numbers are found in blue type on select products.

3M™ Versaflo™ V-Series Supplied Air* Valves



3M™ Supplied Air* Respirators



Note: Headgear, breathing tube, air control valve, and compressed air supply hose are required parts in a NIOSH-approved system. Any NIOSH certification appearing on 3M components is strictly limited to use in an approved air system and only in full accordance with the specifications and limitations under said approval. NIOSH certifies complete assemblies only, not sub-assemblies.

*It is the employer's responsibility to ensure that the compressed air used with any supplied air system meets the requirements for at least Grade-D breathing air per the Compressed Gas Association Commodity Specification G-7.1 in the U.S. as specified in the Occupational Safety and Health (OSHA) Respiratory Protection standard 1910.134(i)(1)(ii). In Canada, refer to CSA Standard Z180.1 table for the quality of compressed breathing air.

**Clip-on 3M™ Welding Shield also available.

***The use of a calibration kit is also required, see part numbers 529-04-48 (Large) or part number 529-04-49 (Small)

3M™ Full Facepiece Respirators for Powered Air and Supplied Air*

Headgear



FF-401 (S) 89418
FF-402 (M) 89421
FF-403 (L) 89424



6700 (S) 07138
6800 (M) 07139
6900 (L) 07140

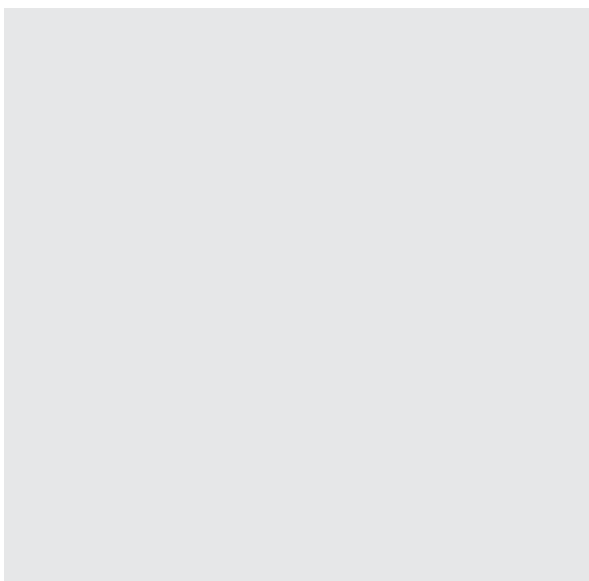


6700DIN (S)
6800DIN (M)
6900DIN (L)



7800S-S**
7800S-M**
7800S-L**

Powered Air Purifying



Powerflow™ Face-Mounted PAPR



GVP PAPR



GVP PAPR



Breathe Easy™ PAPR

Note: the BP-15 Battery is available. The BC-210 Battery Charger, which charges the BP-15 battery, is discontinued.

Supplied Air



Dual Airline
Supplied Air



Dual Airline
Supplied Air



Dual Airline
Supplied Air



Dual Airline
Supplied Air



Supplied Air



Supplied Air

* It is the employer's responsibility to ensure that the compressed air used with any supplied air system meets the requirements for at least Grade-D breathing air per the Compressed Gas Association Commodity Specification G-7.1 in the U.S. as specified in the Occupational Safety and Health (OSHA) Respiratory Protection standard 1910.134(i)(1)(ii). In Canada, refer to CSA Standard Z180.1 table for the quality of compressed breathing air.

** Clip-on 3M™ Welding Shield also available.



Technical Data Bulletin



#196 Inspection, Cleaning and Storage Procedures for 3M™ Versaflo™ M-Series Headgear Assemblies

Published: December 2011 Rev 1

Replaces all previously published Bulletins until superseded.

Introduction

The 3M™ Versaflo™ M-Series Headgear are designed to be used with certain 3M breathing tubes and air sources to form a complete respirator system. Occupational use of respirators must be in compliance with applicable health and safety standards. By United States regulation employers must establish a written respirator protection program meeting the requirements of the Occupational Safety and Health Administration (OSHA) Respiratory Protection standard 29 CFR 1910.134 and any applicable OSHA substance specific standards. OSHA 1910.134 states that employers shall ensure that respirators are inspected, cleaned, and properly stored.

This Technical Data Bulletin will review the 3M suggested cleaning procedures as well as inspection and storage guidelines. Refer to the M-Series Headgear *User Instructions* as well as the *User Instructions* for your specific air source for proper assembly, use and limitations of your specific respirator system.

Inspection

The 3M™ M-Series Headgear must be inspected before each use to ensure good operating condition. Inspect entire headgear for signs of damage or wear including dents, rips, cracks, color changes, chalking, fading, flaking and penetration. Carefully inspect all headgear components including the following. If any signs of wear and/or damage are discovered during the inspection, remove the headgear from use and service or replace as appropriate. Failure to do so may affect respirator performance and reduce the degree of protection provided. Consult the M-Series Headgear *User Instructions* for information on available spare parts.

Visor and visor frame

- Look for scratches or other visual distortions that could make it difficult to see through the visor.
- Look for signs that the visor has warped or cracked. A warped visor may not fit properly into the headgear and on the M-400 series may not seal against the jaw.

- Ensure the visor stays firmly in the up (open) and down (closed) positions.
- Ensure visor buttons are present, firmly secured, and flush to the visor frame.
- Examine the visor gasket for tears or other damage. Gasket should be pliable and not brittle.
- Ensure the visor gasket makes contact with the headgear shell when the visor is the closed position.

Head suspension

- Look for cracks, rips, fading, or other damage.
- Ensure head suspension ratchet operates properly.
- Inspect the web straps for rips, tears, fraying, or fading.
- Look for worn stitching.
- Ensure straps are properly attached.

Faceseal or inner/outer shroud

- Look for tears, holes, stretched elastic, gaps in seams, damage to stitching or other damage.
- Examine the gasket for tears or other damage.

Inspection, Cleaning and Storage Procedures for 3M™ Versaflo™ M-Series Headgear Assemblies

- The gasket should be pliable and not brittle.
- Ensure face seal or inner and outer shroud is securely and properly attached.
- Inspect the zipper of the inner shroud and ensure it is completely attached to the outer shroud.

Headgear shell

- Look for visible damage including dents, cracks, color change, chalking or fading.
- Any M-300/M-400 headgear subjected to severe impact should be removed from service and replaced even if damage is not readily apparent.

Forehead seals

- Ensure they are properly and securely attached and are free from damage including rips, tears, and holes.

Inspect date codes on visors, shells, and other plastic components and ensure parts have not exceeded their maximum life. The “in use” or “operational” life will vary with frequency and conditions of use. Headgear subjected to more wear and tear or use outdoors in direct sunlight may need to be replaced more frequently than headgear used indoors. Any headgear showing signs of damage should be

removed from use and serviced or replaced as appropriate. 3M recommends a maximum life of 3 years from the date of manufacture.

Cleaning

The M-series headgear should be cleaned regularly. Follow the hygiene practices established by your employer for the specific contaminants to which the respirator assembly has been exposed.

A clean cloth, sponge or soft brush dampened with a mild solution of soapy water may be used to wipe down the M-series visors, headgear shells, head suspensions (including the webbing), and all other plastic parts. Rinse with clean water. Washing temperature should not exceed 120 °F (49 °C). Air dry all parts inside and out thoroughly before storage or reuse.

The comfort pad/sweat pad (M-957) may be hand washed or laundered with a solution of soapy water.

Commercial respirator washers and driers

The M-Series Headgear may be washed in a commercial respirator washer and dryer. 3M washed a small number of M-Series samples in a washer (Georgia Steel model GS1200) and dried them in a dryer (Georgia Steel model GS3000).

The wash agents used in the washer were as follows:

- Detergent: FK270-G low foam detergent
- Disinfecting agent: FG350
- Rinse aide: RP355

Samples were partially disassembled for washing. The visor frame and suspensions (including the webbing) were removed and placed separately in the washer and dryer. Face seals and/or shrouds were removed and were NOT washed and dried as part of this test. See page 5 of this bulletin for information on cleaning face seals and/or shrouds.

All samples were cycled through the washer and then dried (20 min at 120 °F, 49 °C) 52 times. Every 10th cycle the product was reassembled and an inspection and qualitative assessment of general function was performed.

After 52 cycles, the M-Series Headgear was not significantly affected. Users choosing to clean the M-Series Headgear in a respirator washer and dryer should thoroughly inspect the headgear following the cleaning cycle before storage and next use and replace any damaged components. For a listing of available spare parts, consult the M-Series Headgear *User Instructions*.

Inspection, Cleaning and Storage Procedures for 3M™ Versaflo™ M-Series Headgear Assemblies

Cleaning with Solvents

Cleaning with solvents can cause damage to plastic components including cracking, crazing, fogging, fading, and decreased strength and capability to withstand impact and penetration. In order to determine the effect of cleaning with solvents and cleaners on the M-Series Headgear, 3M wiped a small number of visors and M-300/400 headgear shells with a limited number of materials and examined them for signs of damage and changes in performance.

The materials used are listed in Table 1. Two controls were used in the testing. The first control samples were not wiped with any materials. The second control samples were wiped with soap and water.

Each headgear shell sample was wiped 200 consecutive times in a laboratory fume hood with one of the test materials using a rag dipped in the test material such that it was wet but not dripping. Visors were wiped 100 consecutive times. Minimal force was used during wiping. The samples were allowed to air dry completely after the last wipe.

Wiped samples were visually inspected for signs of damage such as cracking, crazing, fogging, and hazing. Following visual inspection, the capability of the samples to withstand impact and penetration were evaluated by testing them against elements of their relevant performance

regulation(s) for eye and face protection or head protection. The objective of this testing was not to show compliance to the regulation, but rather to gauge a significant decrease in performance when compared to the control samples.

The results of the testing are summarized in Table 1.

- M-300/400 Headgear shell: Wiped samples performed similar to the controls in the impact and penetration testing. There was no significant decrease in performance. Two of the chemicals, acetone and methyl ethyl ketone caused a visual color change to the shell.
- Standard visor (M-925): Two of the test materials, acetone and methyl ethyl ketone, caused fogging of the visor. Wiped samples performed similar to the controls in the impact testing. There was no significant decrease in performance.
- Hard coated visor (M-927): None of the test materials caused any visual damage. Wiped samples performed similar to the controls in the impact testing for most of the substances, however as noted in Table 1, visors wiped with acetone, 3M Citrus Cleaner, and 3M 504 Respirator Wipes exhibited decreased performance. In the case of acetone and the Citrus Cleaner, there was a significant decrease in the ability of the visor to withstand impact. Some

samples wiped with the 504 respirator wipes exhibited some minor cracking that did not occur in the control samples.

The preferred method for routine cleaning of the M-Series Headgear is with soap and water followed by a bleach and water wipe down if needed to help sanitize the headgear. If the M-300/400 Headgear shell or M-Series visors become contaminated with dirt, debris, paint overspray, or other substances that cannot be removed with soap and water, Table 1 can be used as a guide for selecting alternate cleaning agents for use on a limited basis. Routine cleaning of plastic components with solvents or more aggressive materials can gradually cause plastics to weaken and lessen its ability to withstand impact. Users should thoroughly inspect the headgear following the cleaning cycle, looking for signs of cracking, fading, fogging, and other visual changes or damage before storage and next use and replace any damaged components.

To help prevent build-up of paint overspray or other contamination on visors, 3M recommends use of the visor peels offs (M-926 or M-928). To help keep the headgear shell clean, 3M recommends the headgear cover (M-972) or head, neck, and shoulder cover (M-976).

Inspection, Cleaning and Storage Procedures for 3M™ Versaflo™ M-Series Headgear Assemblies

TABLE I
Effect of Wiping Select M-300/M-400 Series Shells and M-Series Visors with Certain Solvents and Cleaners

Sample	M-300/400 Headgear Shells		M-925 Standard Polycarbonate Visor		M-927 Hard Coated Polycarbonate Visor	
	Visual Change	Impact/Penetration Testing	Visual Change	Impact/Penetration Testing	Visual Change	Impact Testing
Acetone	Color change	No significant effect on performance	Fogging	No significant effect on performance	None detected ¹	Decrease in performance ³
Ethanol	None detected	No significant effect on performance	None detected	No significant effect on performance	None detected	No significant effect on performance
Isopropyl Alcohol	None detected ¹	No significant effect on performance	None detected ¹	No significant effect on performance	None detected ¹	No significant effect on performance
Methyl Ethyl Ketone	Color change	No significant effect on performance	Fogging	No significant effect on performance	None detected ¹	No significant effect on performance
Mineral Spirits	None detected	No significant effect on performance	None detected	No significant effect on performance	None detected	No significant effect on performance
3M 504 Respirator Wipes	None detected	No significant effect on performance	None detected	No significant effect on performance	None detected	Decrease in performance ²
3M Citrus Cleaner	None detected ¹	No significant effect on performance	None detected ¹	No significant effect on performance	None detected ¹	Decrease in performance ³
Bleach (0.5%)	None detected	No significant effect on performance	None detected	No significant effect on performance	None detected	No significant effect on performance
Soap and Water (control)	None detected	No significant effect on performance	None detected	No significant effect on performance	None detected	No significant effect on performance

¹ While no damage was observed, the test material did leave a residue.

² Minor cracking exhibited in some samples that did not occur in the control samples

³ Significant decrease in performance and capability of the visor to withstand impact.

Inspection, Cleaning and Storage Procedures for 3M™ Versaflo™ M-Series Headgear Assemblies

Cleaning fabric components

The face seals, headgear cover, and head neck and shoulder cover are intended to be disposable. No cleaning is recommended. Cleaning the flame resistant face seal (M-937) or Headgear Cover (M-972) may result in a loss of flame resistant properties. The recommendation for cleaning shrouds depends on the specific shroud being used.

- M-445 Standard Outer Shroud This shroud is generally considered to be disposable and should be replaced when worn, damaged or soiled. A clean cloth or sponge dampened with a mild solution of water and liquid household soap may be used to gently wipe down the outer surfaces and the shroud gasket. Thoroughly air dry before storage. Inspect closely before reuse.
- M-446 Premium Outer Shroud: A clean cloth or sponge dampened with a mild solution of water and liquid household soap may be used to gently wipe down the outer surface and the shroud gasket. Shroud may also be gently hand washed or laundered at low temperature with mild detergent. Do not use chlorine bleach or fabric conditioners. Washing temperature should not exceed 104 °F (40 °C). Thoroughly air dry before storage. Inspect closely before reuse.

Dispose of when worn or damaged.

- M-447 Flame Resistant Outer Shroud: This shroud is made from Nomex® IIIA fabric which is inherently flame resistant. It may be hand washed or laundered in warm water with a mild detergent. Wash shroud separately from any other fabrics to prevent contamination with lint from flammable fibers. Do not use chlorine bleach or soaps. Soap scum may be flammable and could adversely affect the thermal protective performance of the material. Thoroughly air dry or dry on low setting before storage. Inspect closely before reuse. Dispose of when worn or damaged.
- M-448 High Durability Outer Shroud: This shroud is made from Cordura® Nylon. It may be hand washed or laundered at low temperature with mild detergent. Do not use chlorine bleach. Thoroughly air dry or dry on low setting before storage. Inspect closely before reuse. Dispose of when worn or damaged.
- M-444 Inner Collar: Hand wash or launder at low temperature with mild detergent. Washing temperature should not exceed 104 °F (40 °C). Do not use chlorine bleach or fabric conditioners.

Thoroughly air dry before storage. Inspect closely before reuse. Dispose of when worn or damaged.

Storage/Disposal

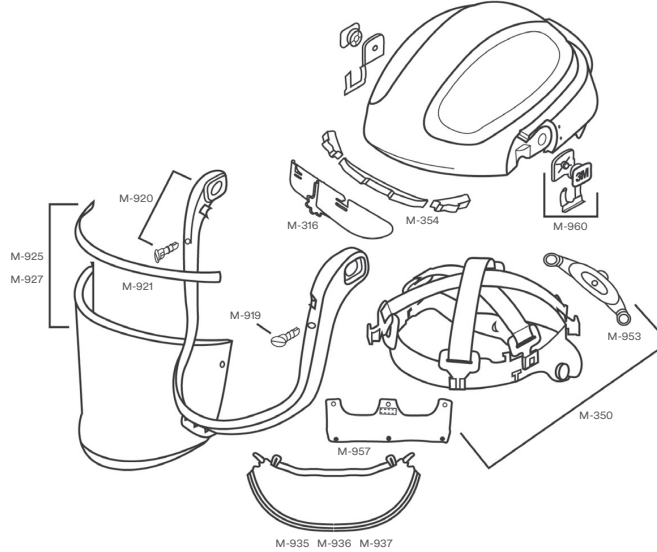
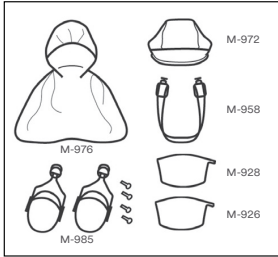
Store headgear in a clean area that is protected from contamination, damage, dirt, debris, product distortion, and direct sunlight or other sources of ultra-violet (UV) light. Do not store next to furnaces, ovens, or other sources of high heat. Do not store outside the recommended storage temperature conditions (see *Specifications Section*) or above 90% humidity. Dispose of product according to local regulations. Prior to first use the product should be stored unopened in its original package in accordance with the recommended storage conditions.

3M™ Versaflo™ M-300 Series

Parts and Accessories



M-300 Series

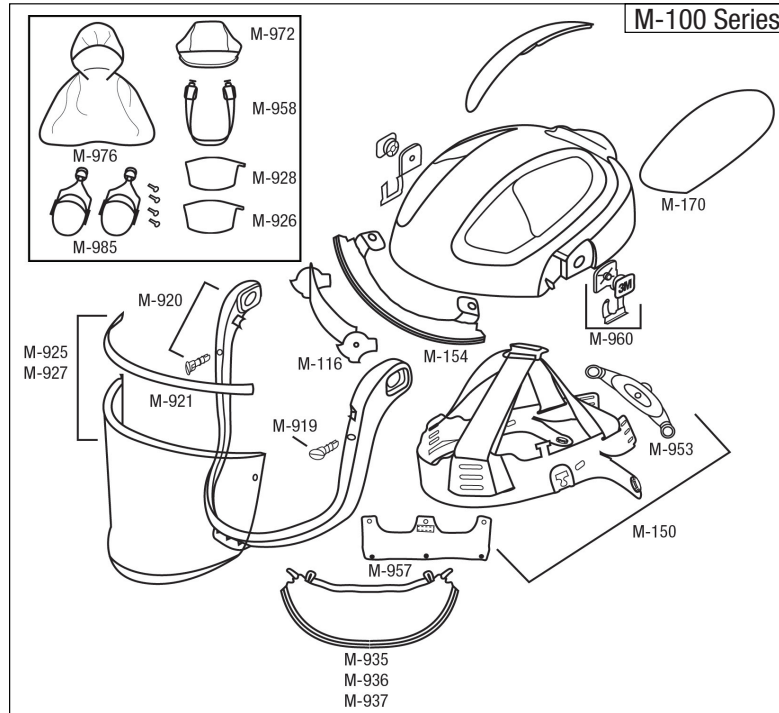


If you discover any signs of wear and/or damage, remove headgear from use and service or replace as appropriate. 3M recommends a maximum life (shelf life plus in use life) of 5 years from the date of manufacture. See the M-Series User Instructions for details on inspection and replacement.

Always read and follow all User Instructions

Part Number/ AAD	Description	Replace when maximum life is reached or when/if:	UPC Ordering #
Headgear Assemblies			
M-301	Respiratory Hardhat, without visor or faceseal		0005113173156
M-305	Respiratory Hardhat Assembly: includes standard visor (M-925), faceseal (M-935), size reducing comfort pad (M-956), and peel off (M-926)		0005113173163
M-307	Respiratory Hardhat Assembly: includes premium visor (M-927), flame resistant faceseal (M-937), size reducing comfort pad (M-956), and peel off (M-928)		0005113173170
Replacement Parts			
M-316	Airflow Deflector	damaged or broken	0005113173187
M-350/37316	Head Suspension	damaged or broken, ratchet will not tighten, or after a severe impact	0005113173194
M-354	Forehead Seal	loose, damaged or missing	0005113173200
M-919	Visor Frame Buttons	damaged or missing	0005113173309
M-920/37320	Visor Frame Assembly: includes 2 visor frame buttons (Visor not included)	damaged or missing	0005113173204
M-921/37321	Visor Gasket	brittle, torn or otherwise damaged	0005113173211
M-925/37323	Standard Visor	scratched, cracked, crazed, warped or otherwise damaged	0005113173235
M-927/37324	Premium Visor	scratched, cracked, crazed, warped or otherwise damaged	0005113173242
M-935/37325	Standard Faceseal	torn, stretched, holes are found or otherwise damaged	0005113173259
M-936/37326	Comfort Faceseal	torn, stretched, holes are found or otherwise damaged	0005113173266
M-937	Flame Resistant Faceseal	torn, stretched, holes are found or otherwise damaged	0005113173316
M-953/37189	Headband Ratchet	damaged or broken, ratchet will not tighten	0005113173187
M-957/37010	Forehead Comfort Pad/Sweat Pad	dirty or foam begins to degrade	5005113173019
M-960	Visor Pivot Kit: includes 2 pivots, 2 springs, and 2 back plates	damaged or missing	0005113173323
Accessories			
M-926/37322	Peel-Off Visor Covers, for M-925 Standard Visor	difficult to see through	5005113173223
M-928/37452	Peel-Off Visor Covers, for M-927 Premium Visor	difficult to see through	5005113173452
M-956/37327	Size Reducing Ratchet Comfort Pad (not shown)	worn or damaged	5005113173278
M-958/37012	Chin Strap	worn or damaged	00051138662561
M-972/37331	Flame Resistant Headgear Cover	ripped, holes are found or otherwise damaged	0005113173310
M-976/37332	Head Neck and Shoulder Cover	torn, stretched, holes are found or otherwise damaged	0005113173327
M-985/37333	Headgear-Mounted Earmuff Assembly	damaged or broken	0005113173334

3M™ Versaflo™ M-100 Series Parts and Accesories



If you discover any signs of wear and/or damage, remove headgear from use and service or replace as appropriate. 3M recommends a maximum life (shelf life plus in use life) of 3 years from the date of manufacture. See the M-Series User Instructions for details on inspection and replacement.

Part Number	AAD Cat. Number	Description	Replace when maximum life is reached or when/if:
Headgear Assemblies			
M-101		Respiratory Faceshield, without visor and faceseal	
M-105	37314	Respiratory Faceshield Assembly: includes standard visor (M-925), faceseal (M-935), size reducing comfort pad (M-956), and peel off (M-926)	
M-107		Respiratory Faceshield Assembly: includes premium visor (M-927), flame resistant faceseal (M-937), size reducing comfort pad (M-956), and peel off (M-928)	
Replacement Parts			
M-116		Airflow Deflector	damaged or broken
M-150	37316	Head Suspension	damaged or broken, ratchet will not tighten, or after a severe impact
M-154		Forehead Seal	loose, damaged or missing
M-919		Visor Frame Buttons	damaged or missing
M-920	37320	Visor Frame Assembly: includes 2 visor frame buttons (Visor not included)	damaged or missing
M-921	37321	Visor Gasket	brittle, torn or otherwise damaged
M-925	37323	Standard Visor	scratched, cracked, crazed, warped or otherwise damaged
M-927	37324	Premium Visor	scratched, cracked, crazed, warped or otherwise damaged
M-935	37325	Standard Faceseal	torn, stretched, holes are found or otherwise damaged
M-936	37326	Comfort Faceseal	torn, stretched, holes are found or otherwise damaged
M-937		Flame Resistant Faceseal	torn, stretched, holes are found or otherwise damaged
M-953	37189	Headband Ratchet	damaged or broken, ratchet will not tighten
M-957	37010	Forehead Comfort Pad/Sweat Pad	dirty or foam begins to degrade
M-960		Visor Pivot Kit: includes 2 pivots, 2 springs, and 2 back plates	damaged or missing
Accessories			
M-170	37318	Faceshield Head Inserts	damaged or broken
M-926	37322	Peel-Off Visor Covers, for M-925 Standard Visor	difficult to see through
M-928	37452	Peel-Off Visor Covers, for M-927 Premium Visor	difficult to see through
M-956	37327	Size Reducing Ratchet Comfort Pad (not shown)	worn or damaged
M-958	37012	Chin Strap	worn or damaged
M-972	37331	Flame Resistant Headgear Cover	ripped, holes are found or otherwise damaged
M-976	37332	Head Neck and Shoulder Cover	torn, stretched, holes are found or otherwise damaged
M-985	37333	Headgear-Mounted Earmuff Assembly	damaged or broken