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NIOSH NPPTL CBRN Full Facepiece APR Mechanical Connector and Gasket drawing Revision 4, July 9, 2007

Letter to All Interested Parties

Issue Date: August 30, 2007

From: Jonathan Szalajda, Chief, Policy and Standards Development Branch, National Personal Protective Technology Laboratory

Subject: Incorporation of the NIOSH CBRN Full Facepiece APR Mechanical Connector and Gasket drawing Revision 4, Dated 09 July 2007, into the Statement of Standard for Chemical, Biological, Radiological and Nuclear (CBRN) Full Facepiece Air-Purifying Respirator (APR), Revision 2; April 4, 2003

The purpose of this letter is to inform all manufacturers that Revision 4 of the NIOSH CBRN Full Facepiece APR Mechanical Connector and Gasket drawing, dated 09 July 2007, has been incorporated into the Statement of Standard for Chemical, Biological, Radiological and Nuclear (CBRN) Full Facepiece Air-Purifying Respirator, Revision 2; April 4, 2003 as Figure 1. This letter serves as a notification that all previous drawing revisions used as Figure 1 are obsolete and are no longer valid.

Revision 4 may be downloaded from the following webpage: <https://www.cdc.gov/niosh/npptl/resources/pressrel/letters/ltr-083007.html>

NIOSH CBRN APR approvals issued prior to the date of this letter remain NIOSH certified and reevaluation is not required. New or pending applications submitted for NIOSH CBRN APR certification must meet the requirements of Revision 4.

The subject drawing was updated in response to questions concerning the dimensioning of Revision 3 (Letter To All Manufacturers, NIOSH/NPPTL, April 5, 2007, Subject:

[Update to the NIOSH CBRN Full Facepiece APR Mechanical Connector and Gasket Drawing from Revision 2 \(January 9, 2004\) to Revision 3 \(April 3, 2007\)](#). <https://www.cdc.gov/niosh/npptl/resources/pressrel/letters/ltr-040307.html> The NIOSH/NPPTL received specific comments from manufacturers regarding Revision 3 and they were considered in the development of Revision 4.

The revised drawings can be downloaded below

1. [Figure 1 Part A Rev 4 July 9, 2007](#) 
2. [Figure 1 Part B Rev 4 July 9, 2007](#) 
3. [Figure 1 Part C and D Rev 4 July 9, 2007](#) 


The modifications to the drawing are as follows:

- Part A: The absolute maximum, canister air-outlet, diameter was increased from 34.0 mm to 34.5 mm. This enhances the flexibility of the design especially with thinner walled plastic canisters.
- Part A: The one degree boundary was added so that no canister cross-sectional back face protrudes beyond the marked boundary to avoid interference with a facepiece component. For ease of measurement, a definitive location for the dimension was moved to the end of the Thread Runout feature.
- Part A: The Minimum Thread Runout was increased from 15.00 mm to 15.25 mm to enhance sealing with the internal thread component of the facepiece. Also, for the same reason, the minimum Effective Thread Length was increased from 13.72 mm to 14 mm.
- Part A: The dimension of the bend radius (2.0 Bend R) at the intersection between the thread neck and the canister back face was removed because it was design restrictive to the manufacturers.
- Part B: The connector depth will range from 7.00 mm to 14.00 mm. This allows the depth measurement to remain consistent for all connectors and eliminates the need for Option B1 and B2 (Shorter and Longer Internal Thread Connector). All measurements will now be taken from the outer edge of the connector to the gasket surface.
- Part B & C: The maximum tolerance on the gasket undercut height and gasket thickness has been removed, and it is left to the discretion of the manufacturer to produce a gasket that fits and is positively retained in the undercut. The connector depth measurement is defined from the outer edge of the connector to the gasket surface, thus controlling the thread engagement.
- Part D: The height of the thread (t1) is a reference dimension and is indicated with parenthesis.

Any questions concerning this letter or the revised drawing should be directed to the NPPTL Policy and Standards Development Branch at 412-386-5200 or E-mail at npptl@cdc.gov.

Attachment A:

[Statement of Standard \(including Figure 1, NIOSH CBRN Full Facepiece APR Mechanical Connector and Gasket\)](#)

[Incorporation of the NIOSH CBRN Full Facepiece APR Mechanical Connector and Gasket drawing Revision 4, Dated 09 July 2007, into the Statement of Standard for Chemical, Biological, Radiological and Nuclear \(CBRN\) Full Facepiece Air-Purifying Respirator \(APR\), Revision 2, April 4, 2003](#)  [PDF – 42 KB]

Last Reviewed: September 7, 2007