

SECTION C

TDPL: 5-19-853

DATED: 03/29/02

END ITEM CODE: R62

NSN: 4240-00-368-6291

PART NO: 5-19-853

START #: C22CAC02

NOMEN: Filter, Particulate, 12 CFM, M13

Unless otherwise specified herein or annotated as for reference only therein, all documents cited on TDPL 5-19-853 dated 29 March 2002 are mandatory for use in the manufacture of the item(s) on this procurement. The following specific exceptions also apply:

1. Where referenced in the TDP, and in TDPL section SPECIFICATIONS AND STANDARDS, change as follows:

Was:	DOD-STD-100	Is:	ASME Y14.100, Y14.24, Y14.34M, and Y14.35M
	MIL-A-81596		SAE-AMS-A-81596
	MIL-F-51079		ASME AG-1
	MIL-F-52011		MIL-DTL-52011
	MIL-STD-105		ANSI/ASQ Z1.4
	MMM-A-250		A-A-59692
	QQ-A-250		ASTM B209
	QQ-A-250/1		ASTM B209
	PPP-P-291		A-A-1051
	QQ-S-571		ANSI J-STD-004, J-STD-005, and J-STD-006
	SAE-AMS-R-6130		ASTM D6576
	UU-P-268		A-A-203

2. TDPL, under SPECIFICATIONS AND STANDARDS, add the following documents:

MMM-A-121	Adhesive, Bonding Vulcanized Synthetic Rubber to Steel
SAE-AMS-QQ-P-416	Plating, Cadmium (Electrodeposited)
ASTM D5118	Standard Practice for Fabrication of Fiberboard Shipping Boxes
ASTM D1974	Standard Practice for Methods of Cleaning, Sealing, and Reinforcing Fiberboard Boxes
ASTM B373	Standard Specification for Aluminum Foil for Capacitors

3. TDPL, under PRODUCT DRAWINGS AND ASSOCIATED LISTS, drawing revisions will be as follows:

5-19-853	R	04-JUN-03	(attached)
5-19-860	J	03-JUN-03	(attached)

4. TDPL, PACKAGING DRAWINGS, add the following Special Packaging Instruction: P5-19-853.

5. TDPL, under OUTSTANDING ENGINEERING CHANGES, delete the documents listed and replace with the following (all attached):

558-0042-001	P5-19-853	3 July 2003
558-0042-002	5-19-853	3 July 2003
558-0042-003	MIL-DTL-52011	3 July 2003

SECTION C

TDPL 5-19-853

Start # C22CAC02

NSN: 4240-00-368-6291

6. Drawing 5-19-853 and Parts List 5-19-857. In place of MIL-F-51079, refer to ASME Standard AG-1, Section FC (HEPA Filters).

7. Special Packaging Instruction P5-19-853, delete "PPP-P-636" and substitute "ASTM D5118 and ASTM D1974". Delete "MIL-P-116" and substitute "MIL-STD-2073/1".

8. The following Statement of Work for Ozone Depleting Chemicals also applies.

STATEMENT OF WORK - OZONE DEPLETING CHEMICALS

1a. The following specifications and standards may be listed and included as part of this Technical Data Package (TDP)/ Scope of Work (SOW):

MIL-STD-2073/1

b. Other specifications and standards, which identify ODCs among alternative substances for use, are part of this TDP/SOW as follows: TT-C-490.

c. The above specifications and standards allow the optional use of Ozone Depleting Substances (ODS) or Ozone Depleting Chemicals (ODC). Preference should be given to the Non-ODS/ODC choices in compliance with Executive Order 12843, dated April 21, 1993, "Procurement Requirements and Policies for Federal Agencies for Ozone Depleting Substances".

2. Other specifications and standards containing ODS/ODC materials and included in this TDP for which a substitute is provided are as follows: N/A.

3. Other specifications and standards included in this TDP that specify use of an ODS/ODC and have been approved for use are as follows: N/A

4. NOTE: Offerers are requested, although not obligated, to perform their own screening of the TDP specifications and standards or SOW and identify any additional potential ODS/ODC to the contracting officer.

5. Shelf Life Markings shall apply to the packaging as specified in contract Section D and shall be in accordance with MIL-STD-129. The shelf life markings shall include the assembled date (mo/yr) and the Inspection/Test date (mo/yr). The inspection/test date shall be 36 months in the future from the assembled date.

INCH-POUND

MIL-DTL-52011G(EA)

8 July 2003

SUPERSEDING

MIL-F-52011F(EA)

25 January 1991

DETAIL SPECIFICATION

FILTER, PARTICULATE, 12 CFM, M13

Inactive for new design after 19 April 1996

This specification is approved for use by the U.S. Army Edgewood Chemical Biological Center, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers one type of particulate filter.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Technical Director, U.S. Army Edgewood Chemical Biological Center, ATTN: AMSSB-REN-SE-SS, Aberdeen Proving Ground, MD 21010-5423 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 4240

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-282 – Filter Units, Protective Clothing, Gas-Mask Components and Related Products: Performance-Test Methods

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

U.S. ARMY EDGEWOOD CHEMICAL BIOLOGICAL CENTER

DRAWINGS

5-19-853 – Filter, Particulate, 12 CFM, M13

(Copies are available from Technical Director, U.S. Army Edgewood Chemical Biological Center, ATTN: AMSSB-REN-SE, Aberdeen Proving Ground, MD 21010-5424.)

2.2 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Materials and components.

3.1.1 Materials. All materials cited on 5-19-853 and on the subsidiary drawings shall conform to the specifications listed thereon, and to the specific characteristics set forth on the drawings.

3.1.2 Components. All components of the particulate filter shall conform to the specifications and drawings listed on 5-19-853 and subsidiary drawings.

3.2 Manufacture and assembly. The particulate filter shall be manufactured and assembled as specified on Drawing 5-19-853.

3.3 Resistance to airflow. The resistance to airflow shall be no greater than 0.8 inch of water gage (iwg) at an airflow rate of 12 standard cubic feet per minute (scfm) when tested as specified in 4.4.1.

3.4 Filtration efficiency. The filters shall be no less than 99.97% efficient in the removal of aerosols with a mean diameter of 0.3 microns when tested in accordance with 4.4.2.

3.5 Air leakage. Air leakage shall be not greater than 0.91 cubic inch per minute when the filter is internally pressurized to a pressure of not less than 12 inches of water when tested as specified in 4.4.2.

3.6 Resistance to rough handling. The filters shall meet the requirements of 3.3, 3.4, and 3.5 after rough handling for 15 minutes at an amplitude of 3/4 inch with the filter face, pleats, and separators in a vertical position, when tested as specified in 4.4.4.

3.7 First article. When specified (see 6.2), a sample shall be subjected to the first article inspection in accordance with 4.2.

3.8 Workmanship. The particulate filter shall be free from chipped, burred, or bent metal sections; foreign matter, such as oily or viscous substances; and rips, tears, or holes in the filtering medium.

4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

- (a) First article inspection (see 4.2)
- (b) Conformance inspection (see 4.3)

4.2 First article inspection.

4.2.1 Sample. The first article sample shall consist of 10 particulate filters manufactured prior to the start of regular production and using the same methods, materials, equipment, and processes as will be used during regular production. The first article sample shall be submitted for inspection and approval in accordance with the terms of the contract.

4.2.2 Inspections to be performed. As determined by the Government, the sample first article items may be subjected to any or all of the examinations and tests specified in this specification and be inspected for compliance with any or all of the requirements of the applicable drawings.

4.2.3 Acceptance criteria. If any first article sample item fails to comply with any of the applicable requirements, the first article sample shall be rejected. The Government reserves the right to terminate inspection upon any failure to comply with any of the requirements. The contractor

shall obtain written approval from the contracting activity prior to proceeding with regular production.

4.3 Conformance inspection.

4.3.1 Lotting. A lot shall consist of the filters produced by one manufacturer, at one plant, from the same materials, under essentially the same manufacturing conditions, and offered for acceptance at one time; however, no more than one lot of filter material shall be represented in any one lot of finished filters. Each lot shall be identified by an alphanumeric lot number. The lot number shall include a manufacturer’s identification symbol consisting of 3 alpha characters, a numeric code identifying the year of production, a code or abbreviation that signifies the month of production, and an interfix – serial number. The interfix – serial number shall change if there is a change in the design, manufacturing process, materials, suppliers, production run, or if a new contract is used.

4.3.2 Sampling. Sampling shall be conducted in accordance with the classification of characteristics in 4.3.5 and, when specified, table I or table II. Samples shall be selected at random.

TABLE I. Sampling for rough handling

Lot size	Sample size
2 to 15	2
16 to 25	3
26 to 90	5
91 to 150	8
151 to 500	13
501 to 1,200	20
1,201 to 10,000	32
10,001 to 35,000	50
35,001 to 500,000	80
Over 500,000	125
Accept the lot represented on zero nonconforming characteristics and reject the lot on one or more nonconforming characteristics for all sample sizes.	

4.3.3 Inspection procedure. Every item in the lot shall be inspected for critical characteristics. Sample filters shall be examined and tested in accordance with the classification of characteristics in 4.3.5. If a filter is found that does not conform to any characteristic inspected 100%, such as filtration efficiency and airflow resistance, the non – conforming filter shall be rejected

MIL-DTL-52011(EA)

and removed from the lot. For characteristics other than filtration efficiency and airflow resistance, failure of any sample filter to conform to any characteristic in the classification of characteristics based on the sampling and acceptance criteria specified therein shall be cause for rejection of the lot represented (see footnote, Table I).

4.3.4 Critical characteristics. Critical characteristics are characteristics whose nonconformance to specified requirements is likely to result in hazardous or unsafe conditions for individuals using, maintaining, or depending upon the product or whose nonconformance to specified requirements is likely to prevent performance of the tactical function of a major end item. Major characteristics are characteristics whose nonconformance to specified requirements is likely to result in failure or to reduce materially the usability of the item for its intended purpose. Minor characteristics are characteristics whose nonconformance to specified requirements is not likely to reduce materially the operation or usability of the item for its intended purpose.

TABLE II. Sampling

Lot size	Inspection levels and sample sizes										
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
2 to 8	*	*	*	*	*	*	*	*	5	3	2
9 to 15	*	*	*	*	*	*	13	8	5	3	2
16 to 25	*	*	*	*	*	20	13	8	5	3	3
26 to 50	*	*	*	*	32	20	13	8	5	5	5
51 to 90	*	*	*	50	32	20	13	8	7	6	5
91 to 150	*	*	125	50	32	20	13	12	11	7	6
151 to 280	*	*	125	50	32	20	20	19	13	10	7
281 to 500	*	315	125	50	48	47	29	21	16	11	9
501 to 1200	*	315	125	75	73	47	34	27	19	15	11
1201 to 3200	1250	315	125	116	73	53	42	35	23	18	13
3201 to 10000	1250	315	192	116	86	68	50	38	29	22	15
10001 to 35000	1250	315	294	135	108	77	60	46	35	29	15
35001 to 150000	1250	490	294	170	123	96	74	56	40	29	15
150001 to 500000	1250	715	345	200	156	119	90	64	40	29	15
500001 and over	1250	715	435	244	189	143	102	64	40	29	15

*Indicates one hundred percent inspection. If sample size exceeds lot size, perform one hundred percent inspection.
Accept the lot represented on zero nonconforming characteristics and reject the lot represented on one or more nonconforming characteristics for all inspection levels.

4.3.5 Classification of characteristics. Conformance examinations and tests shall be as specified in the following classification of characteristics paragraphs. When specified herein, accept on 0 and reject on 1 attributes sampling inspection shall be performed on the designated characteristics using the stated levels in table II for selection of sample sizes.

CLASSIFICATION OF CHARACTERISTICS

PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER 5-19-853
4.3.5	Filter, particulate, 12 cfm, M13			NEXT HIGHER ASSY
CATEGORY	CHARACTERISTIC	SAMPLING AND ACCEPTANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD
Critical				
1	Filtration efficiency	100 percent inspection	3.4	4.4.3
2	Air leakage	100 percent inspection	3.5	4.4.2
Major				
101	Airflow resistance	100 percent	3.3	4.4.1
102	Resistance to rough handling	Table I	3.6	4.4.4
103	Component evident	Table II, level VII	3.1.2	VI
104	Component correctly assembled	Table II, level VII	3.2	VI
105	Overall dimensions correct	Table II, level VII	3.2	CE
106	Marking evident and correct	Table II, level VII	3.2	VI
107	Workmanship	Table II, level VII	3.8	VI
Minor				
201	Marking legible	Table II, level X	3.2	VI
NOTES:				
CE – Commercial inspection equipment				
VI – Visual inspection				

4.4 Tests.

4.4.1 Airflow resistance. The airflow resistance shall be determined at the airflow of 12 cfm. The measured pressure drop across the particulate filter, when corrected to standard conditions of 21° C (70° F) and 1 atm (1013 mbar), shall be no greater than that specified in 3.2. The up-stream and down-stream static pressure measuring tubes shall be as close as possible to the filter and shall not be on a section of duct that has a changing cross sectional area. Test for airflow resistance as follows:

- (a) Connect the filter to a source of forced air.
- (b) Set the flow of air through the filter to 12 cfm.
- (c) Record the barometric pressure.
- (d) Measure and record the air stream temperature.
- (e) Determine and record the difference between up-stream and downstream static pressure.

If the recorded air stream temperature and barometric pressure is different than 21° C (70° F) and 1 atm, calculate and record the air flow resistance ($\bullet P$ (cal)) using the equation below to correct the measured airflow resistance to airflow resistance at standard conditions:

$$\bullet P \text{ (cal)} = \bullet P \text{ (measured)} \times P \text{ (test)} \times 86.21 \bullet [(492 + 1.8T)^{1.768}]$$

where:

- $\bullet P$ (cal) – air flow resistance corrected to standard conditions in millimeters of water gage (mm wg).
- P (test) – barometric pressure at time of test in millimeters of mercury (mm Hg).
- $\bullet P$ (measured) – air flow resistance from test measurement in millimeters of water.
- T – temperature of air stream flowing through the filter in degrees C.

Note: Correction for nonstandard conditions is not required when it is clear that the passage or failure of the filter is not in doubt.

4.4.2 Air leakage. The sample filters shall be tested for leakage using a test apparatus which shall have two flat (within .005 inch) smooth (32 micro inch) surfaced metal plates at least .25 inch thick that can be clamped to the gaskets on the inlet and outlet of the filter. The clamping mechanism shall be controlled so that the total combined compression of the two gaskets does not exceed .120 inch. There shall be provisions in one of the plates which shall be fixed to the base of the apparatus for pressurized air to be introduced into the filter under test through a flow meter capable of measuring a flow of 0.91 ± 0.06 cubic inches per minute of air flow. There shall also be provisions for measuring the pressure inside the filter between plates through the use of a manometer or pressure gage capable of measuring pressures of 12.00 inches of water with an accuracy of $\pm .06$ inches of water. The internal pressure measurement shall be taken through a separate passage through one of the two plates from the passage that is used to introduce the measured flow of air. The apparatus shall also have a flow regulation valve by which the air flow can be controlled. The test shall be conducted by clamping the filter to be tested between the two

metal plates, opening the air flow control valve, and adjusting the flow until a pressure of at least 12 inches of water is established within the filter. The flow rate that is required to maintain this pressure is the air leakage value. The filter will be determined to be defective if the air leakage value exceeds 0.91 cubic inches per minute.

4.4.3 Filtration efficiency. The test apparatus used to measure the filtration efficiency shall be capable of maintaining a stable concentration of aerosol with a mean particle size of 0.3 microns with a steady flow through the filter of 12 scfm. The test apparatus shall have the capability to determine the concentration of aerosol both upstream and down stream of the filter within 0.005%. The downstream sample point shall be located such that changing of its location across the ductwork does not cause a significant change in the measured concentrations. This shall be verified using a filter with a known measurable leak. The filter shall be placed in the test apparatus such that the flow of air containing the challenge aerosol is in the direction indicated by the marking on the filter, and the flow of aerosolized air shall be maintained at 12 ± 3 scfm. This flow shall be maintained for not less than 1 minute or more than 2 minutes. The filter shall be rejected if the downstream concentration exceeds 0.03 percent of the upstream concentration which indicates that the filtration efficiency is less than 99.97 percent. (See note 6.5)

4.4.4 Resistance to rough handling. The filters shall be rough handled in accordance with Method T105.10 of MIL–STD–282, and then tested for resistance to airflow, air leakage, and filtration efficiency in accordance with 4.4.1, 4.4.2, and 4.4.3 respectively.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point § packaging activity within the Military Department or Defense Agency, or within the Military Department § System Command. Packaging data retrieval is available from the managing Military Department § or Defense Agency § automated packaging files, CD–ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The particulate filter covered by this specification is intended to be used in an air purifier.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- (a) Title, number, and date of this specification

(b) Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see section 2)

(c) First article:

(1) Time allowed for contractor submission of samples for Government test and evaluation after award of contract when testing is performed by the Government.

(2) Name and address of test facility and shipping instructions when testing is performed by the Government.

(3) Time required for the Government to notify the contractor whether or not to proceed with production.

(d) Shelf life code

(e) Level of packaging (see section 5).

6.3 Submission of alternative inspection provisions. Proposed alternative inspection provisions should be submitted by the contractor to the procuring contracting officer for evaluation and approval by the technical activity responsible for preparation of this specification.

6.4 Changes from previous issues. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

6.5 Filtration efficiency testers and aerosol materials. The TDA 100 Filter Penetration Tester manufactured by Air Techniques Inc. has been found to be capable of performing the filtration efficiency test when operated with Poly–Alpha Olefin (common trade names are Ethyl Flow 164 and Emery 3004) or Dioctylphthalate (DOP) as the aerosol agent. DOP is not recommended because of its potential as a carcinogen. Filtration efficiency is calculated by subtracting the measured percent penetration from 100 percent.

$$\%P = [(PPM \text{ downstream}) / (PPM \text{ upstream})] \times 100\%$$

$$\text{Eff} = 100\% - (\%P)$$

Where:

PPM – Particles Per Minute

%P – Percent Penetration

Eff – Filtration Efficiency

MIL-DTL-52011(EA)

Custodian:

Army – EA

Preparing activity:

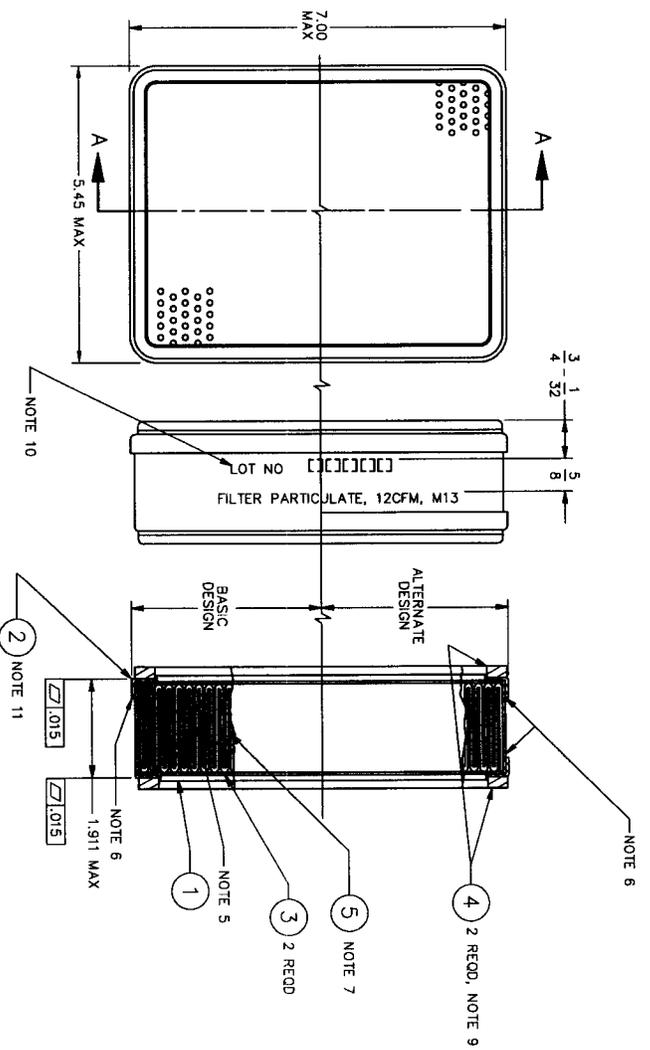
Army – EA

Project No. 4240-A266

REV	DESCRIPTION	DATE (MM-DD-YY)	APPROVED
1	R REPLACES 05-19-853 REV P DATED 91-05-17	03-06-04	BBS
2	NOR COP-0002-0002, 03-05-22		

- NOTES
1. FOR DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH E.
 2. THE FOLLOWING ARE DIMENSIONS UNLESS INDICATED BY:
 - DIMENSIONS ARE IN INCHES
 - DIMENSIONS ARE IN MILLIMETERS
 - DIMENSIONS APPLY AFTER PLATING
 - DIMENSIONS ON STOCK MATERIAL, SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
 - DIMENSIONS ON STOCK MATERIAL, SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
 - DIMENSIONS ON STOCK MATERIAL, SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
 - DIMENSIONS ON STOCK MATERIAL, SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.

3. FOR TEST SEE SPEC MIL-F-52011.
5. SEAL ITEMS 3 TO ITEM 1 AND/OR ITEM(S) 2, AND SEAL ITEM 5 OVER A 1/4 INCH WIDE AREA AROUND THE EDGES OF ITEMS 3 TO PRODUCE A LEAK-TIGHT JOINT USING ITEM 7.
6. SEAL ITEM(S) 2 TO ITEM 1 ALL AROUND TO PRODUCE A LEAK-TIGHT JOINT USING ITEM 7.
7. AN OPTIONAL REINFORCEMENT OF 1100 ALUMINUM SHEET, TEMPER H14, .012 NOMINAL STOCK THICKNESS, SPEC QQ-A-250/1 MAY BE ASSEMBLED COMPLETELY AROUND THE PLEATED FILTER. ALSO, FILTER MEDIUM, FIRE RESISTANT, HIGH EFFICIENCY, SPEC MIL-F-00510/9 MAY BE USED AS A FILTER BETWEEN REINFORCEMENT AND FILTER FRAME AND/OR BETWEEN FILTER ELEMENT AND FILTER FRAME TO HELP SECURE THE FILTER ELEMENT IN PLACE, AND TO HELP CONTROL LEAKAGE.
9. BOND GASKETS (ITEM 4) TO FILTER BODY AND/OR COVER(S). IN ABSENCE OF PRESSURE SENSITIVE ADHESIVE, USE ITEM 6.
10. MARK WITH 1/4 IN. HIGH LETTERS USING INK MARKING STENCIL OPaque, TYPE I OR III, SPEC A-A-208, COLOR BLACK NO. 37038.
11. 1 REQUIRED ON BASIC DESIGN, 2 REQUIRED ON ALTERNATE DESIGN.



THIS DRAWING INCOMPLETE WITHOUT PLS-19-853

REV	DATE	DESCRIPTION	BY	CHKD
1				

APPROXIMATION	UNLESS OTHERWISE SPECIFIED	DIMENSIONS ARE IN INCHES
D	D28-16-61	2 PLACE DECIMALS ± .04
D	D5-19-1772	3 PLACE DECIMALS ± .010
D	D5-19-2262	ANGLES ± 0° 30'
C	CS-19-884	

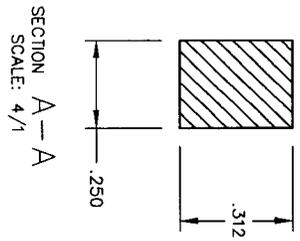
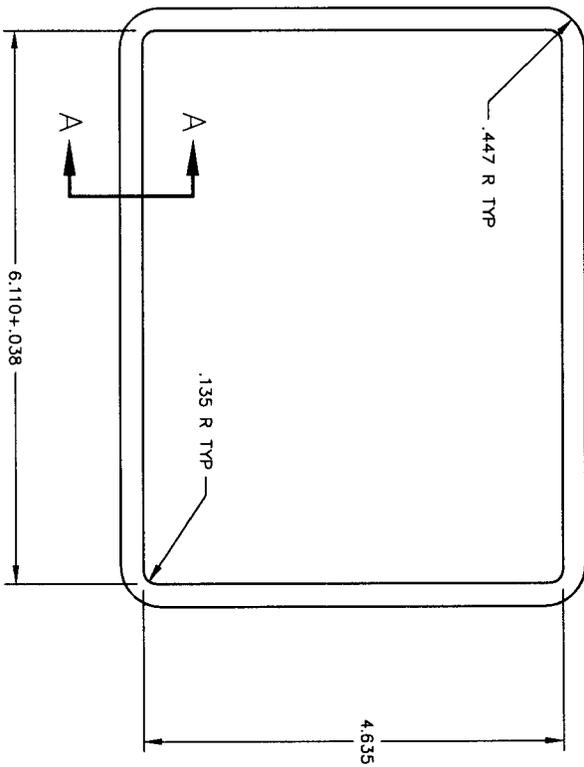
EQUIPMENT CODE NO.	MATERIAL
350	527
557	558
564	655

DESIGNER	CHECKED	DATE	SCALE
F. HARTMAN	CEO	50-08-02	D
JOSSEPH A. RICCI			
ALBERT R. HERRING			

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND	ENGINEER CHEMICAL BIOLOGICAL CENTER	ARMY RESEARCH DEVELOPMENT CENTER
FILER, PARTICULATE, 12CFM, M13		
CAGE CODE	DATE NO.	
81361	D5-19-853	

REVISIONS			DATE (YR-MO-DA)	APPROVED
J	REPLACES C5-19-860 REV H, DATED 91-03-21		03-06-03	BBS
NOR	CCP-0002-0001, 03-05-22			

- NOTES:
- THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH ASME Y14.100 WITH THE ADDITION OF APPENDICES B THROUGH E.
 - THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
 - REMOVE BURRS
 - BREAK SHARP EDGES .010 MAX
 - FILETS R .010 MAX
 - ALL OVER, EXCEPT AS NOTED
 - DIMENSIONS APPLY AFTER PLATING
 - TOLERANCES ON STOCK MATERIAL SIZES SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
 - ANSI Y14.5-DATED 1973 APPLIES
 - FED-STD-H28 APPLIES
 - NEOPRENE, TYPE II, GRADE A, CONDITION MEDIUM, SPEC MIL-R-6130.
 - GASKET MAY BE COATED ON ONE SIDE WITH A PRESSURE SENSITIVE ADHESIVE. THE ADHESIVE SHALL HAVE A TEMPERATURE RANGE RATING OF -50° TO +160° AND A MINIMUM PEEL STRENGTH OF 5 LBS/IN.



QTY	DWG	DRAWING OR PART NO.	NOMENCLATURE OR MATERIAL	SPECIFICATION	ITEM NO.
REQD	SIZE				

APPLICATION		UNLESS OTHERWISE SPECIFIED		DESIGN APPROVAL		DRAWING APPROVAL		GASKET	
DWG SIZE	NEXT ASSY	DIMENSIONS ARE IN INCHES	TOLERANCES ON:	DESIGN DATE (YR-MO-DA)	DESIGN BY	DESIGN CHECKER	DRAWING APPROVAL	SIZE	CAGE CODE
D	D5-19-853	2 PLACE DECIMALS ± .04	3 PLACE DECIMALS ± .015	50-08-02	JRC	VJG	ALBERT R. HERWIG	C	81361
C	C5-19-1175	FRACTIONS ± 1/64	ANGLES ± 1°	STARTED	F. HARTMAN		JOSEPH A. RICCI	SCALE	1/1
C	C5-19-2354								
EQUIPMENT CODE NO.		MATERIAL		DESIGN APPROVAL		DRAWING APPROVAL		DWG NO.	
350	349	SEE NOTE 3		JOSEPH A. RICCI		ALBERT R. HERWIG		C5-19-860	
552	564								
558	665								

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

NOT APPLICABLE TO INTERPLANT SHIPMENTS (A)

SPECIAL PACKAGING INSTRUCTION(SPI) (A)						NATIONAL STOCK NUMBER 4240-00-368-6291	
NOMENCLATURE Filter, Particulate, 12 CFM, M13					UI EA	QUP 1	SPI NUMBER (PN) P5-19-853
Cleaning & Drying shall be in accordance with MIL-STD-2073-1							
MILITARY PRESERVATION REQUIREMENT (MIL-STD-2073-1, Method 10)	STEPS	DRAWING OR SPECIFICATION	STYLE	TYPE	GRADE	CLASS	SIZE AND REMARKS (INCHES)
Cushioning	(C)1	ASTM D 4727	Variety SW	CF	W5c	WR	4 3/8 x 5 7/8 (4 Reqd)
Container	2	ASTM D 5118	RSC	CF	W5c	WR	5 1/2 x 2 1/2 x 7
Closure	3	ASTM D 1974					Method 2B6
INTERMEDIATE PACKAGING AND PACKING <input checked="" type="checkbox"/> In accordance with MIL-STD-2073-1 <input type="checkbox"/> As specified hereon.				MARKING <input checked="" type="checkbox"/> In accordance with MIL-STD-129 <input checked="" type="checkbox"/> As specified hereon. (D)			
QUALITY PERFORMANCE and TESTING REQUIREMENTS <input checked="" type="checkbox"/> In accordance with MIL-STD-2073-1 <input checked="" type="checkbox"/> As specified hereon. SEE NOTE (B)							
Unless otherwise specified, materials shall be minimum size in accordance with MIL-STD-2073-1. Tolerances shall be in accordance with material specifications.							
UNIT PACK LOGISTICS DATA (Approximate unit pack weight and size)							
WEIGHT (POUNDS)		CUBE (CUBIC FEET)		SIZE (EXTERIOR FEET)			
1.38 lbs.		.070 cu. ft.		.48 x .23 x .63			
REMARKS/ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.							
<p>(A) – This SPI is not applicable for Interplant shipments. Packaging and marking for interplant shipment is for supplies and materials that do not directly enter the military supply system. Typical interplant shipments are shipments from a vendor to a subcontractor or a prime contractor, or between contractors and subcontractors, or from a vendor or contractor to a military arsenal, plant, or other activity for evaluation, immediate use, or further processing as specified in the applicable contract.</p> <p>(B) – SAMPLING FOR PACKAGING QUALITY PERFORMANCE AND TESTING First Article – First Article packaging sample shall consist of three unit pack containers and their contents for non-destructive testing and inspection. The packaging sample shall be taken from the First Article quantity specified in the MIL-2^{DTL}-52011.</p> <p>Conformance Inspection – Sampling size shall be in accordance with Table II, Attributes Sampling Plans of MIL-STD-1916. For examination and non-destructive tests, Verification level II shall be used.</p>							
Original Preparer: <i>N J Matassa</i>				Revised by: <i>Dean Hansen</i>		Date: <i>Feb 26 2003</i>	
ITEM DATA (APPROX) ITEM CODE - 665, 350, 527, 558, 552, 564 ITEM SIZE - 7 x 5 1/2 x 2 inches ITEM WEIGHT - 1.13 lbs.	SBCCOM 81361				C		
	AMSSB-REN-SE-PK		JGS	S8K1506-0002	B	7 Sep 88	
			AMD	C6K2765-0002	A	23 Dec 86	
	PAGE NUMBER 1	NUMBER OF PAGES 2	ERR R62-010		-	14 Mar 85	
			APPROVAL		REVISION	DATE	

558-0042-001
 NOR Continuation Sheet 2 of 3

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SPECIAL PACKAGING INSTRUCTIONNATIONAL STOCK NUMBER
4240-00-368-6291NOMENCLATURE
Filter, Particulate, 12CFM, M13PAGE NUMBER
2 of 2SPI NUMBER (PN)
P5-19-853

- (C) – Place two pieces of specified material on each side of the filter, inside of the gasket, to prevent deformation of the gasket.
- (D) – Lot numbers and shelf life markings shall be applied.

559-0042-001
NOR Continuation Sheet 3 of 3

NOTICE OF REVISION (NOR) THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED		1. DATE (YYMMDD) 03/05/23	Form Approved OMB No. 0704-0188
Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.		2. PROCURING ACTIVITY NO. 558-0042	
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM.		3. DODAAC	
4. ORIGINATOR	b. ADDRESS (Street, City, State, Zip Code)	5. CAGE CODE	6. NOR NO.
a. TYPED NAME (First, Middle Initial, Last) Guy Cabell	SBCCOM ATTN: AMSSB-RSO-CPT (RI) Rock Island, IL 61299	81361	558-0042-002
		7. CAGE CODE 81361	8. DOCUMENT NO. 5-19-853
9. TITLE OF DOCUMENT Filter, Particulate, 12 CFM, M13	10. REVISION LETTER		11. ECP NO. 558-0042
	a. CURRENT P	b. NEW	
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES Filter, Particulate, 12 CFM, M13			NOR Sheet 1 of 1
13. DESCRIPTION OF REVISION			
<p>This change is against Drawing 5-19-853, sheet 1 of 1, revision P, with NOR CCP-0002-002 outstanding.</p> <p>1. Note 3, change "MIL-F-52011" to "MIL-DTL-52011".</p> <p>2. Add the following note to the notes block:</p> <p>"12. Unless otherwise instructed, when packaging this part for delivery to the Government as a contract line item, use SPI P5-19-853."</p>			
14. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X one)	<input checked="" type="checkbox"/>	(1) EXISTING DOCUMENT SUPPLEMENTED BY THIS NOR MAY BE USED IN MANUFACTURE.	
	<input type="checkbox"/>	(2) REVISED DOCUMENT MUST BE RECEIVED BEFORE MANUFACTURER MAY INCORPORATE THIS CHANGE.	
	<input type="checkbox"/>	(3) CUSTODIAN OF MASTER DOCUMENT SHALL MAKE ABOVE REVISION AND FURNISH REVISED DOCUMENT.	
b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT CDR, SBCCOM, ATTN: AMSSB-RSO-CPT (RI)		c. TYPED NAME (First, Middle Initial, Last) GUY N. CABELL	
d. TITLE Configuration Manager, Collective Protection Team	e. SIGNATURE 		f. DATE SIGNED (YYMMDD) 2003/07/03
15. a. ACTIVITY ACCOMPLISHING REVISION	b. REVISION COMPLETED (Signature)		c. DATE SIGNED (YYMMDD)

DD Form 1695, APR 92

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PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THE CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM.		3. DODAAC	
4. ORIGINATOR	b. ADDRESS (Street, City, State, Zip Code)	5. CAGE CODE	6. NOR NO.
a. TYPED NAME (First, Middle Initial, Last) Guy Cabell	SBCCOM ATTN: AMSSB-RSO-CPT (RI) Rock Island, IL 61299	81361	558-0042-003
		7. CAGE CODE 81361	8. DOCUMENT NO. MIL-F-52011
9. TITLE OF DOCUMENT Filter, Particulate, 12 CFM, M13	10. REVISION LETTER		11. ECP NO. 558-0042
	a. CURRENT F	b. NEW	
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES Filter, Particulate, 12 CFM, M13			NOR Sheet 1 of 12
13. DESCRIPTION OF REVISION			
<p>This change is against MIL-F-52011, revision F with Amendment 1, with NORs R62-035-002, R62-0039-001, and R62-0043-001 outstanding.</p> <p>1. Release new revision G of this specification, which will now be known as MIL-DTL-52011, as shown on continuation sheets 2 through 12.</p>			
14. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X one)	<input checked="" type="checkbox"/> (1) EXISTING DOCUMENT SUPPLEMENTED BY THIS NOR MAY BE USED IN MANUFACTURE. <input type="checkbox"/> (2) REVISED DOCUMENT MUST BE RECEIVED BEFORE MANUFACTURER MAY INCORPORATE THIS CHANGE. <input type="checkbox"/> (3) CUSTODIAN OF MASTER DOCUMENT SHALL MAKE ABOVE REVISION AND FURNISH REVISED DOCUMENT.		
b. ACTIVITY AUTHORIZED TO APPROVE CHANGE FOR GOVERNMENT CDR, SBCCOM, ATTN: AMSSB-RSO-CPT (RI)		c. TYPED NAME (First, Middle Initial, Last) GUY N. CABELL	
d. TITLE Configuration Manager, Collective Protection Team	e. SIGNATURE <i>Guy N. Cabell</i>		f. DATE SIGNED (YYMMDD) 2003/09/03
15. a. ACTIVITY ACCOMPLISHING REVISION	b. REVISION COMPLETED (Signature)		c. DATE SIGNED (YYMMDD)

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