

[INCH-POUND]
A-A-52160A
18 January 2011
SUPERSEDING
A-A-52160
25 August 1990

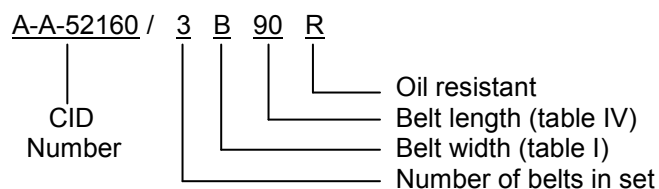
COMMERCIAL ITEM DESCRIPTION

INDUSTRIAL V-BELTS (MULTIPLE DRIVE)

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. **SCOPE.** This commercial item description (CID) covers the general requirements for V-type industrial drive belts. V-type industrial drive belts covered by this CID are intended for commercial/industrial applications.
2. **CLASSIFICATION/PART IDENTIFICATION NUMBER (PIN).** This CID uses a classification system which is included in the PIN as shown in the following example (see 7.1).

TABLE I. Cross section size.



Example PIN denotes A-A-52160 belt 0.66 inches wide, standard datum length of 91.8 inches with oil resistant capabilities. Three belts in a set.

Cross section designation	Width - inches
A	.05
B	.66
C	.88
D	1.25
	Width – mm
13C	13
16C	16
22C	22
32C	32

3. SALIENT CHARACTERISTICS.

3.1 **Material and dimensions.** The belt dimensions, tolerances, and method of measurement shall be in accordance with RMA IP-20. Belt cord shall be pre-stretched and impregnated with a rubber compound. The belts shall be static conductive type in accordance with RMA IP-3-3. The belts shall not crack break or require more torque to start or continue rotation than that specified in table II when tested as follows.

3.2 **Functional test.** Place the belt in an unrestrained horizontal position so that, it does not contact the side walls of the test chamber. Maintain the temperature of the oven at 150°F plus or minus 2°F for 12 hours. At the end of the 12 hour period, remove the belt from the oven and allow the belt to cool for 30 minutes at room temperature. Install the belt on the pulley arrangement shown on figure 1 and apply

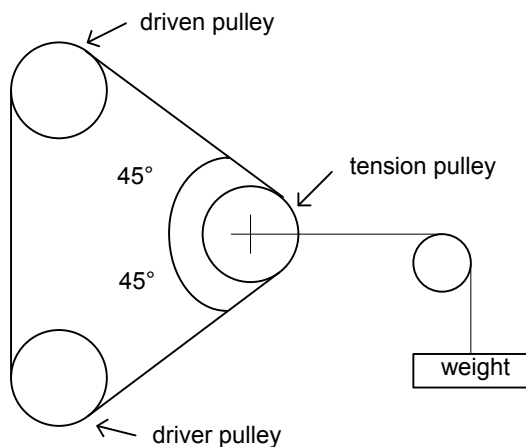
Comments, suggestions, or questions on this document should be addressed to: DLA Land and Maritime, Attn: VAI, P.O. Box 3990, Columbus, OH 43218-3990, or emailed to FluidFlow@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.daps.dla.mil>.

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tension as specified in table III. Lock the tension pulley location, remove the tension weights from the belts, then place the assembly in a cold chamber at a temperature of minus 40°F plus or minus 2°F for 12 hours. At the end of the 12 hour period while the assembly is still at minus 40°F plus or minus 2°F rotate the pulley until the belt has been rotated not less than two complete revolutions. Measure and record the torque required to start and the torque required to continue rotation, then remove the belt from the assembly and examine for evidence of cracking. Any evidence of cracking, or torque necessary to start or continue rotation in excess of the amount specified in table II shall constitute failure of this test.

TABLE II. Torque.

Cross section design	Torque required to start		Torque required to continue	
	Ft-lbs	Nm	Ft-lbs	Nm
A, 13c	26	35	13	17
B, 16c	30	40	15	20
C, 22c	45	61	30	40

FIGURE 1. Pulley arrangement.TABLE III. Pulley size.

Belt cross section	Pulleys, driver & driven		Tension pulley		Tension weights	
	Inches	cm	Inches	cm	lbs	newtons
A, 13c	5.0	13	3.5	9	35	155
B, 16c	6.0	15	5.0	13	45	200
C, 22c	7.0	18	7.0	18	115	510

3.3 Representative cross-section. The belts in A(13c), B(16c) and C(22c) cross-sections shall be representative of D(32c) cross-section for the temperature test provided they are manufactured with the same basic compounds and tensile members.

3.4 Oil resistant belts. For oil resistant belts the thickness shall increase no more than 20%, nor decrease more than 1% when immersed in IRM 901 and IRM 902 as cited in ASTM D471. The test shall consist of two 3 inch (7.6mm) long sections of belt being immersed in 150°F (70° C) oil bath for 22 hours. The average of three measurements, the center point and ½ inch (13mm) from each end, shall constitute the thickness. When required the age of the belts shall not be more than 12 months old from the time of manufacture to the date of acceptance by the government.

3.5 Marking. The V-belt supplied to this CID shall be marked with the manufacturer's (MFR's) standard commercial PIN. The PIN marked on the unit pack shall be the CID PIN.

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TABLE IV. Belt length.

	Standard pitch length (inches)				Standard effective length (mm)			
	Pitch length				Cross section			
	A	B	C	D	13C	16C	22C	32C
26	27.3				710			
31	32.3				750			
35	36.3	36.8			800			
38	39.3	39.8			850			
42	43.3	43.8			900			
46	47.3	47.8			950	960		
51	52.3	52.8	53.9		1000	1040		
55	56.3	56.8			1075	1090		
60	61.3	61.8	62.9		1120	1120		
68	69.3	69.8	70.9		1150	1190		
75	75.3	76.8	77.9		1230	1250		
80	81.3				1300	1320		
81		82.8	83.9		1400	1400	1400	
85	86.3	86.8	87.9		1500	1500	1500	
90	91.3	91.8	92.9		1710	1700		
96	97.3		98.9		1790	1800	1830	
97		98.8			1865	1900	1900	
100	106.3	106.8	107.9		1965	1980	2000	
110	113.3	113.8	114.9		2120	2110	2160	
120	121.3	121.8	122.9	123.3	2220	2240	2260	
128	129.3	129.8	130.9	131.3	2350	2360	2390	
144		145.8	146.9	147.3	2500	2500	2540	
158		159.8	160.9	161.3	2600	2620	2650	
173		174.8	175.9	176.3	2730	2820	2800	
180		181.8	182.9	183.3	2910	2920	3030	
195		196.8	197.9	198.3	3110	3130	3150	3190
210		211.8	212.9	213.3	3310	3330	3350	3390
240		240.3	240.9	240.8		3530	3550	
270		270.3	270.9	270.8		3740	3760	3800
300		300.3	300.0	300.8		4090	4120	4160
330			330.9	330.8		4200	4220	4250
360			360.9	360.8		4480	4500	4540
390			390.9	390.8		4650	4680	4720
420			420.9	420.8		5040	5060	5100
480				480.8		5300	5440	5480
540				540.8		5760	5780	5800
600				600.8		6140	6150	6180
660				660.8		6520	6540	6560
						6910	6920	6940
						7290	7300	7330
						7670	7680	
							8060	8090
							8440	8470
							8820	8850
							9200	9240
								10000
								10760
								11530
								12290

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4. **REGULATORY REQUIREMENTS.** The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with 23.403 of the Federal Acquisition Regulation (FAR).

5. **PRODUCT CONFORMANCE PROVISIONS.**

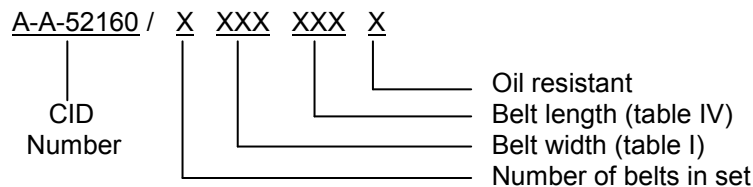
5.1 Product conformance. The products shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

6. **PACKAGING.**

6.1 Packaging. Preservation, packing, and marking shall be as specified in the contract or order.

7. **NOTES.**

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID.



Example PIN A-A-52160/316C240R denotes A-A-52160 belt 16 millimeters wide, standard datum length of 3530 millimeters with oil resistant capabilities. Three belts in a set.

7.2 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these belts to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.3 Source of documents.

Federal Regulations

FEDERAL ACQUISITION REGULATION (FAR)

FAR 23.403 - Federal Acquisition Regulations

(Copies of these documents are available online at <https://www.acquisition.gov/far/> or from the Superintendent of Documents, U.S. Government Printing Office, 732 N. Capital Street, NW #808, Washington, DC 20402-0001.)

Other Publications

ASTM INTERNATIONAL

ASTM D471 - Standard Test Method for Rubber Property—Effect of Liquids

(Copies of these documents are available online at <http://www.astm.org> or from the ASTM International, P.O. Box C700, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

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RUBBER MANUFACTURERS ASSOCIATION

RMA IP-20	-	Classical V-Belts and Sheaves
RMA IP-3-3	-	Static Conductive Test Method for Power Transmission Belts

(Copies of these documents are available online at <https://www.rma.org> or from the Rubber Manufacturers Association, 1400 K St., N.W., Washington D.C. 20005.)

7.4 Ordering data. The contract or order should specify the following:

- a. CID document number, revision, and CID PIN.
- b. Product conformance provisions.
- c. Packaging requirements.

7.5 Government users. To acquire information on obtaining these belts, from the Government inventory system, contact Defense Supply Center Columbus, ATTN: DSCC-VAI, Post Office Box 3990, Columbus, OH 43218-3990, or telephone (614) 692-0565.

7.6 Subject term (key word) listing.

Rubber
Oil resistant

MILITARY INTERESTS:

Custodians:

Army - AR
Navy - SH
Air Force - 99
DLA - CC

Review activities:

Army - AT
Navy - AS, CG, MC, NP, SA, YD
Air Force - 71

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FAS

Preparing activity:

DLA - CC

(Project 3030-2010-002)

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