

INCH-POUND

MIL-P-83461/1B

8 May 1959

SUPERSEDING

MIL-P-83461/1A

8 September 1956

MILITARY SPECIFICATION SHEET

PACKING, PREFORMED, PETROLEUM HYDRAULIC FLUID RESISTANT
IMPROVED PERFORMANCE AT 275°F (135°C) SIZES AND TOLERANCES

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation MIL-P-83461

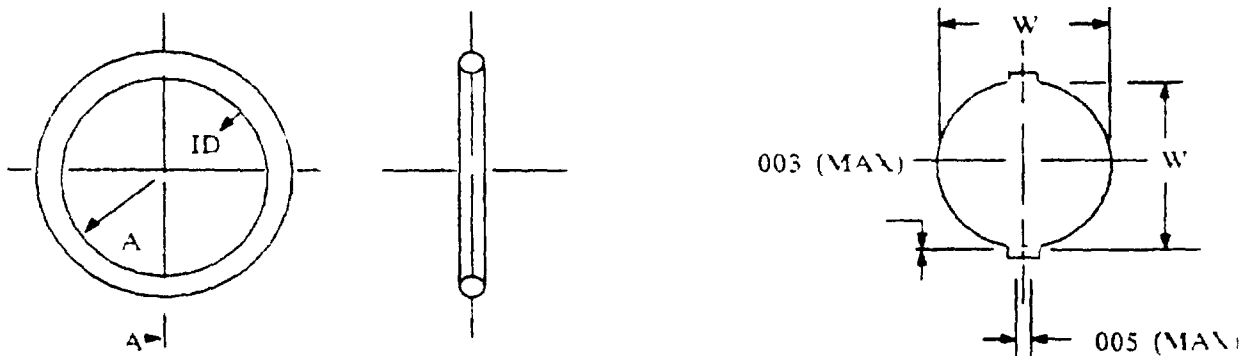
PURPOSE The purpose of this specification sheet is to set up a standardized part numbering system for O-rings procured to MIL-P-83461

ⓑ APPLICABLE DOCUMENT

AS 568 Aerospace Size Standards for O-Rings

(Applications for copies should be addressed to Society of Automotive Engineers
400 Commonwealth Drive Warrendale, PA 15096)

ⓑ DIMENSIONS AND TOLERANCES



ALL DIAMETERS OF CROSS-SECTION
SHALL EQUAL W
SECTION A - A

ⓑ denotes changes

1 of 8

AMSC N A

ESC 5330

DISTRIBUTION STATEMENT A Approved for public release distribution unlimited

MIL-P-83461/1B

Ⓑ PART NUMBERS When this document is used for procurement of O-rings part numbers shall consist of the following

- a The letter M and the specification sheet number
- b A dash followed by the appropriate dash number from table I or table II

Example 1 (table I)

M83461/1-214

Example 2 (table II)

M83461/1-337

Ⓑ INTENDED USE O-rings listed in table I are recommended for use in packing glands as specified in MIL-G-5514. O-rings listed in table II are the remainder of those listed in AS568, however, the applicable gland sizes for these O-rings are not specified in MIL-G-5514. The table II sizes are not recommended for hydraulic applications.

Custodians

Army - A\

Navy - AS

Air Force - 11

Preparing activity

Air Force - 11

Review activities

Air Force - 82, 99

DLA - IS

Project No 5330-0797

User activities

Army - ME

Air Force - 71

MIL-P-53461 1E

TABLE I Sizes listed in MIL-G-5514

DASH	ACTUAL SIZE				DASH	ACTUAL SIZE			
NO 1'	WIDTH	INSIDE DIAMETER			NO 1'	WIDTH	INSIDE DIAMETER		
001	0 040	±0 003	0 029	±0 004	118	0 103	±0 003	0 862	±0 010
002	0 050	↓	0 042	↓	119	↓	↓	0 924	↓
003	0 060	↓	0 056	↓	120	↓	↓	0 987	↓
004	0 070	±0 003	0 070	±0 005	121	↓	↓	1 049	↓
005	↓	↓	0 101	↓	122	↓	↓	1 112	↓
006	↓	↓	0 114	↓	123	↓	↓	1 174	±0 012
007	↓	↓	0 145	↓	124	↓	↓	1 237	↓
008	↓	↓	0 176	↓	125	↓	↓	1 299	↓
009	↓	↓	0 208	↓	126	↓	↓	1.362	↓
010	↓	↓	0 239	↓	127	↓	↓	1 424	↓
011	↓	↓	0 301	↓	128	↓	↓	1 487	↓
012	↓	↓	0 364	↓	129	↓	↓	1 549	±0 015
013	↓	↓	0 426	↓	130	↓	↓	1 612	↓
014	↓	↓	0 489	↓	131	↓	↓	1 674	↓
015	↓	↓	0 551	±0 007	132	↓	↓	1 737	↓
016	↓	↓	0 614	±0 009	133	↓	↓	1 799	↓
017	↓	↓	0 676	↓	134	↓	↓	1 862	↓
018	↓	↓	0 739	↓	135	↓	↓	1 925	±0 017
019	↓	↓	0 801	↓	136	↓	↓	1 987	↓
020	↓	↓	0 864	↓	137	↓	↓	2 050	↓
021	↓	↓	0 926	↓	138	↓	↓	2 112	↓
022	↓	↓	0 989	±0 010	139	↓	↓	2 175	↓
023	↓	↓	1 051	↓	140	↓	↓	2 237	↓
024	↓	↓	1 114	↓	141	↓	↓	2.300	±0.020
025	↓	↓	1 176	±0 011	142	↓	↓	2 362	↓
026	↓	↓	1 239	↓	143	↓	↓	2 425	↓
027	↓	↓	1 301	↓	144	↓	↓	2 487	↓
028	↓	↓	1 364	±0 013	145	↓	↓	2 550	↓
110	0 103	±0 003	0 362	±0 005	146	↓	↓	2 612	↓
111	↓	↓	0 424	↓	147	↓	↓	2 675	±0 022
112	↓	↓	0 487	↓	148	↓	↓	2 737	↓
113	↓	↓	0 549	±0 007	149	↓	↓	2.800	↓
114	↓	↓	0 612	±0 009	210	0 139	±0 004	0 734	±0 010
115	↓	↓	0 674	↓	211	↓	↓	0 796	↓
116	↓	↓	0 737	↓	212	↓	↓	0 859	↓
117	↓	↓	0 799	±0 010	213	↓	↓	0 921	↓

1' All dash numbers conform with the uniform dash system of AS568

MIL-P-53461-1B

TABLE I Sizes listed in MIL-G-5514 - Continued

DASH NO 1	ACTUAL SIZE				DASH NO 1	ACTUAL SIZE			
	WIDTH		INSIDE DIAMETER			WIDTH		INSIDE DIAMETER	
214	0 139	±0 004	0 984	±0 010	325	0 210	±0 005	1.475	±0 015
215			1 046	326	1.600				
216			1 109	327	1 725				
217			1.171	328	1 850				
218			1 234	329	1 975			±0 018	
219			1 296	330	2 100				
220			1 359	331	2 225				
221			1 421	332	2 350				
222			1 484	333	2 475			±0 020	
223			1 609	334	2 600				
224			1 734	335	2 725				
225			1 859	336	2 850				
226			1 984	337	2 975			±0 024	
227			2 109	338	3 100				
228			2 234	339	3 225				
229			2 359	340	3 350				
230			2 484	341	3 475				
231			2 609	342	3 600			±0 028	
232			2 734	343	3 725				
233			2 859	344	3.850				
234			2 984	345	3 975				
235			3 109	346	4 100				
236			3 234	347	4 225			±0 030	
237			3 359	348	4 350				
238	3 484	349	4 475						
239	3 609	±0 028							
240	3 734	425	0 275	±0 006	4 475	±0 033			
241	3 859	426			4 600				
242	3 984	427			4 725				
243	4 109	428			4 850				
244	4 234	429			4 975	±0 037			
245	4 359	430			5.100				
246	4 484	431			5.225				
247	4 609	432			5 350				

NOTE O-ring sizes -013 through -028, -117 through -149 and -223 through -247 are intended only for use as static seals, and are not to be used in applications involving reciprocating or rotary movement

MIL-P-88461 1E

(E) TABLE II Sizes now listed in MIL-G-5514

DASH NO 1	ACTUAL SIZE				DASH NO 1	ACTUAL SIZE			
	WIDTH		INSIDE DIAMETER			WIDTH		INSIDE DIAMETER	
029	0 070	±0 003	1 489	±0 013	155	0 103	±0 003	3 987	±0 028
030			1 614	↓	156			4 237	±0 030
031			1 739	±0 015	157			4.487	↓
032			1 864	↓	158			4.737	↓
033			1 989	±0 018	159			4.987	±0 035
034			2 114	↓	160			5 237	↓
035			2 239	↓	161			5 487	↓
036			2 364	↓	162			5 737	↓
037			2 489	↓	163			5 987	↓
038			2 614	±0 020	164			6 237	±0 040
039			2 739	↓	165			6 487	↓
040			2 864	↓	166			6 737	↓
041			2 989	±0 024	167			6 987	↓
042			3 239	↓	168			7 237	±0 045
043			3 489	↓	169			7 487	↓
044			3 739	±0 027	170			7 737	↓
045			3 989	↓	171			7 987	↓
046			4 239	±0 030	172			8 237	±0 050
047			4 489	↓	173			8 487	↓
048			4 739	↓	174			8 737	↓
049			4 989	±0 037	175			8 987	↓
050			5 239	↓	176			9 237	±0 055
	↓			↓	177			9 487	↓
102	0 103		0 049	±0 005	178	↓	↓	9 737	↓
103			0 081	↓					↓
104			0 112	↓	201	0 139	±0 004	0 171	±0 005
105			0 143	↓	202			0 234	↓
106			0 174	↓	203			0 296	↓
107			0 206	↓	204			0 359	↓
108			0 237	↓	205			0 421	↓
109			0 299	↓	206			0 484	↓
				↓	207			0 546	±0 007
150			2 862	±0 022	208			0 609	±0 009
151			2 987	±0 024	209			0 671	↓
152			3 237	↓					↓
153			3 487	↓	248			4 734	±0 030
154	↓	↓	3 737	±0 028	249	↓	↓	4 859	±0 035

MIL-P-83461 1B

TABLE I Sizes listed in MIL-G-5514 - Continued

DASH NO 1	ACTUAL SIZE			
	WIDTH		INSIDE DIAMETER	
433	0 275	$\pm 0 006$	5 475	± 0.037
434			5 600	
435			5 725	
436			5 850	
437			5 975	
438			6 225	± 0.040
439			6 475	
440			6 725	
441			6 975	
442			7 225	± 0.045
443			7 475	
444			7 725	
445			7 975	
446			8 475	$\pm 0 055$
447			8 975	
448			9 475	
449			9 975	
450			10 475	$\pm 0 060$
451			10 975	
452			11 475	
453			11 975	
454			12 475	
455			12 975	
456			13 475	$\pm 0 070$
457			13 975	
458			14 475	
459			14 975	
460			15 475	

MIL-P-83461/1B

(B) TABLE II Sizes not listed in MIL-G-5514 - Continued

DASH	ACTUAL SIZE				DASH	ACTUAL SIZE			
NO 1	WIDTH	INSIDE DIAMETER			NO 1	WIDTH	INSIDE DIAMETER		
250	0 139	±0 004	4 984	±0.035	309	0.210	±0 005	0 412	±0 005
251			5 109		310			0 475	
252			5 234		311			0 537	±0.007
253			5 359		312			0 600	±0 009
254			5 484		313			0 662	
255			5 609		314			0 725	±0 010
256			5 734		315			0 787	
257			5 859		316			0 850	
258			5 984		317			0 912	
259			6 234	±0 040	318			0 975	
260			6 484		319			1 037	
261			6 734		320			1 100	±0.012
262			6 984		321			1 162	
263			7 234	±0 045	322			1 225	
264			7 484		323			1 287	
265			7 734		324			1 350	
266			7 984						
267			8 234	±0 050	350			4 600	±0 030
268			8 484		351			4 725	
269			8 734		352			4 850	
270			8 984		353			4.975	±0 037
271			9 234	±0 055	354			5.100	
272			9 484		355			5 225	
273			9 734		356			5 350	
274			9 984		357			5 475	
275			10 484		358			5 600	
276			10 984	±0 065	359			5 725	
277			11 484		360			5 850	
278			11 984		361			5 975	
279			12.984		362			6 225	±0 040
280			13 984		363			6 475	
281			14 984		364			6.725	
282			15 955	±0 075	365			6.975	
283			16 955	±0 080	366			7.225	±0 045
284			17 955	±0 085	367			7.475	

MIL-P-5514 B

(B) TABLE II Sizes not listed in MIL-G-5514 - Continued

DASH NO 1	ACTUAL SIZE				DASH NO 1	ACTUAL SIZE			
	WIDTH		INSIDE DIAMETER			WIDTH		INSIDE DIAMETER	
365	0.210	±0.005	7.725	±0.045	469	0.275	±0.006	19.955	±0.095
369	↓	↓	7.975	↓	470	↓	↓	20.955	↓
370	↓	↓	8.225	±0.050	471	↓	↓	21.955	±0.100
371	↓	↓	8.475	↓	472	↓	↓	22.940	±0.105
372	↓	↓	8.725	↓	473	↓	↓	23.940	±0.110
373	↓	↓	8.975	↓	474	↓	↓	24.940	±0.115
374	↓	↓	9.225	±0.055	475	↓	↓	25.940	±0.120
375	↓	↓	9.475	↓					
376	↓	↓	9.725	↓					
377	↓	↓	9.975	↓					
378	↓	↓	10.475	±0.060					
379	↓	↓	10.975	↓					
380	↓	↓	11.475	±0.065					
381	↓	↓	11.975	↓					
382	↓	↓	12.975	↓					
383	↓	↓	13.975	±0.070					
384	↓	↓	14.975	↓					
385	↓	↓	15.955	±0.075					
386	↓	↓	16.955	±0.080					
387	↓	↓	17.955	±0.085					
388	↓	↓	18.955	±0.090					
389	↓	↓	19.955	±0.095					
390	↓	↓	20.955	↓					
391	↓	↓	21.955	±0.100					
392	↓	↓	22.940	±0.105					
393	↓	↓	23.940	±0.110					
394	↓	↓	24.940	±0.115					
395	↓	↓	25.940	±0.120					
461	0.275	±0.006	15.955	±0.075					
462	↓	↓	16.455	↓					
463	↓	↓	16.955	±0.080					
464	↓	↓	17.455	±0.085					
465	↓	↓	17.955	↓					
466	↓	↓	18.455	↓					
467	↓	↓	18.955	±0.090					
468	↓	↓	19.455	↓					