

Seals Selector Handbook

FORMERLY TETRAFLUOR

Table of Dimensions:

B Dia.	Dash No.	B Dia.	Dash No.
300	336	300	2875
302	337	302	2997
304	338	304	3122
306	339	306	3247
308	340	308	3372
310	341	310	3497
312	342	312	3622
314	343	314	3747
316	344	316	3872
318	345	318	3997
320	346	320	4122
322	347	322	4247
324	348	324	4372
326	349	326	4497
328		328	4622
330		330	4747
332		332	4872
334		334	4997
336		336	5122
338		338	5247
340		340	5372
342		342	5497
344		344	5622
346		346	5747
348		348	5872
350		350	5997
352		352	6122
354		354	6247
356		356	6372
358		358	6497
360		360	6622
362		362	6747
364		364	6872
366		366	6997
368		368	7122
370		370	7247
372		372	7372
374		374	7497
376		376	7622
378		378	7747
380		380	7872
382		382	7997
384		384	8122
386		386	8247
388		388	8372
390		390	8497
392		392	8622
394		394	8747
396		396	8872
398		398	8997
400		400	9122
402		402	9247
404		404	9372
406		406	9497
408		408	9622
410		410	9747
412		412	9872
414		414	9997
416		416	10122
418		418	10247
420		420	10372
422		422	10497
424		424	10622
426		426	10747
428		428	10872
430		430	10997
432		432	11122
434		434	11247
436		436	11372
438		438	11497
440		440	11622
442		442	11747
444		444	11872
446		446	11997
448		448	12122
450		450	12247
452		452	12372
454		454	12497
456		456	12622
458		458	12747
460		460	12872
462		462	12997
464		464	13122
466		466	13247
468		468	13372
470		470	13497
472		472	13622
474		474	13747
476		476	13872
478		478	13997
480		480	14122
482		482	14247
484		484	14372
486		486	14497
488		488	14622
490		490	14747
492		492	14872
494		494	14997
496		496	15122
498		498	15247
500		500	15372

Technical Diagram: Shows an O-ring cross-section with dimensions: B (Dia.), G (Groove Width), R (Groove Radius), and E (Diametral Clearance Max.).

Notes:

- This part is supplied in long web.
- Tetrafluor for other material.
- O-ring supplied on request as seal dash.

Ordering Instructions:

Example: IF 402 M 14N
 -Basic PIN
 For Minigroove only
 Size Dash No.
 For optional notches

Ordering Instructions Boeing Part Number BACR12BG

Example: BACR12BG-2
 Basic PIN
 Size Dash No.
 Material (15% Graphite filled TFE)

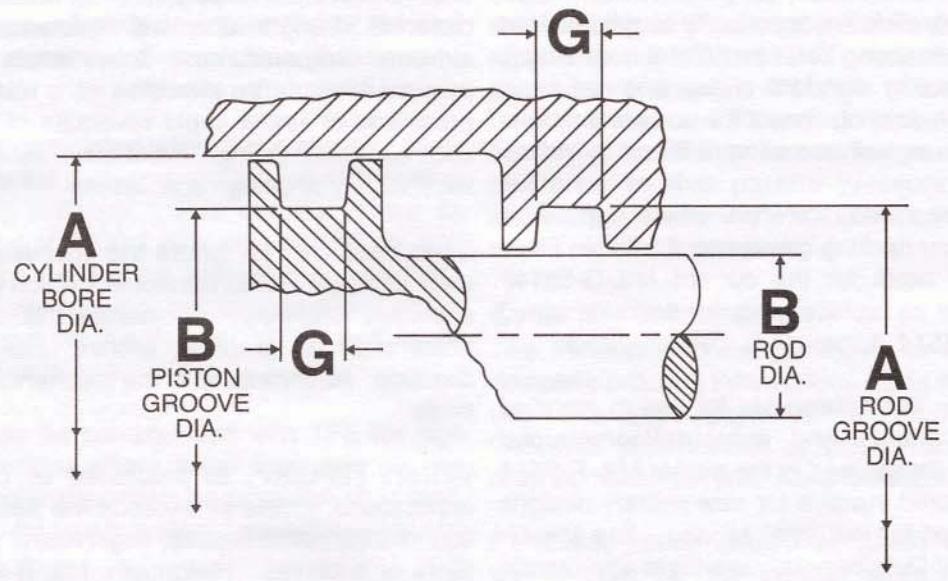
Tetrafluor

ROD SEAL INSTALLATION MIL-P-57 REVISION TWO BACK-UP GL

TF 40

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		1 B/U	TF 872	10	
		2 B/U	TF 238	11	
	MIL-P-5514C,D,E	No B/U	TF 875	12	
		No B/U	TF 393	13	
		No B/U	TF 426	14	
		No B/U	TF 452	15	
		1 B/U	TF 931	16	
		1 B/U	TF 404	17	
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		2 B/U	TF 451	20	
		Special	TF 455	21	
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		2 B/U	TF 400	24	
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		No B/U	TF 435	39	
		No B/U	TF 385	40	
		No B/U	TF 453	41	
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Comparison of MIL-G-5514F with MIL-P-5514 Revisions C, D, and E

MIL-P-5514A & B are the original series specifications which are now obsolete for new design... Dimensionally MIL-P-5514A & B differ significantly from MIL-P-5514C, D & E and MIL-G-5514F.

Dash No.	Comments
-110, -112, -114, -116 and -337 thru -349	Cylinder bore and piston groove diameters of Rev. F are .001 less than those specified for Revisions C, D & E.
-327 thru -336	Cylinder bore and piston groove diameters of Rev. F are .002 less than those specified for Revisions C, D & E.
-325 and -326	Cylinder bore and piston groove diameters of Rev. F are .003 less than those specified for Revisions C, D & E.
-210 thru -247	Width (G) of one-back-up grooves of Rev. F is .010 greater than those specified for Revisions C, D & E.
-425 thru -460	Width (G) of one-back-up grooves of Rev. F is .035 greater than those specified for Revisions C, D & E.

TECHNICAL DATA SECTION

Seals Design

Thanks for giving CoorsTek the opportunity to get involved with your sealing application. You'll find that this catalog is easy to use for selecting standard piston and rod seals since each installation drawing shows the complete dimensioning of seal glands as well as mating rods and cylinders.

The seal configurations also reference, where applicable, the appropriate military packing gland specification. Thus, there are CoorsTek seals for the current MIL-G-5514F gland designs as well as replacements for seals designed to operate in MIL-P-5514, A through E revision glands.

Some seals shown in this catalog are for use in modified military/aerospace glands and industrial/commercial standards. Some of those used in the earlier MIL-P-5514 revisions are considered inactive for new military designs but can be considered for industrial service. The MIL-G-5514 designs, "Heavy-Duty Service", are more appropriate for current fluid power systems, which require longer seal life and longer periods of operation at elevated temperature.

CoorsTek's patented MiniGroove® feature can be supplied on most sealing surfaces. This exclusive process helps seal against low pressures and yields even lower friction coefficients than normally available.

The material property charts will assist you in selecting the right material for the job. While such charts are helpful, they should not be considered the ultimate authority but should be used as a guide only. In the long run, the best authority is the experience that comes with designing literally thousands of seals for aircraft, military and industrial applications. Let CoorsTek get involved at the outset of your design and we can probably save you a lot of time and money in the long run.

Materials

"Teflon" is the registered trademark of the DuPont Company for its fluorocarbon resins and is known generically as PTFE (polytetrafluoroethylene). There are about a dozen manufacturers of PTFE resins today who supply the raw materials to processors. CoorsTek processes these materials and fabricates finished parts for customers throughout the world...and has been doing this for over a quarter of a century.

In addition to the general properties of Teflon* and Teflon* blends shown on the charts, there are other authoritative works on the subject, which have been published by the major manufacturers of fluorocarbon resins. These publications are available to you through your CoorsTek representative.

Teflon* seals provide the lowest coefficient of friction available with state-of-the-art materials as well as other

excellent mechanical properties for low moisture absorption, dielectric strength, chemical resistance and operation at extreme temperatures. Some seals are designed to prevent blowout or extrusion of a rubber O-ring at high pressures or under rapid reversals of pressure. Others, such as Teflon* O-rings, make excellent static seals under a wide variety of design conditions.

In no case can we ignore the specially processed resins such as virgin PTFE Tetralon® - which is processed for its extremely long-wearing properties - or materials containing fillers such as graphite, bronze, glass or molybdenum disulfide. All contribute to the mechanical properties of the seals.

VIRGIN TEFLON*, as processed by CoorsTek for seals applications, meets or exceeds the MIL-R-8791 specification. As the name implies, virgin resins are molded without fillers or additives. Historically, MIL-R-8791 has been the one selected by seal designers when they want to be assured of getting virgin material. A recent MIL-R-8791 specification (Amendment 1 to the "C" Revision) was changed to permit the use of reprocessed material, which left the design engineer somewhat at a loss when it came to specifying virgin Teflon*. Revision "D", however, specifically excludes the use of reprocessed materials. In any event, CoorsTek does not approve the use of reprocessed Teflon* for seals design. A callout such as MIL-R-8791, under any revision, is interpreted by CoorsTek as premium grade virgin PTFE.

There is another common specification, AMS3651, which is sometimes specified by the seal designer who may be under the erroneous assumption that it, too, is virgin PTFE. Unfortunately, AMS3651 does allow the use of reprocessed material and the design engineer must be very selective in his choice of suppliers to be sure he is getting virgin PTFE when it is required.

TETRALON® is virgin PTFE, and is a registered trademark of CoorsTek for its longwearing Teflon* material, which also embodies superior anti-extrusion and dimensional stability properties. Otherwise, there is virtually no noticeable difference in the mechanical properties of Tetralon® vs. Teflon* except that the former will outwear Teflon* by anywhere from 10 to 100 times. This material is color-coded blue by means of a special dye. It should be noted that, in some applications, Tetralon® might require a few additional "wearing in" cycles to burnish the cylinder or rod. After that, it will wear for a very long time as a most effective seal.

GLASS FIBER is widely used filler for PTFE seals. Depending upon the amount used (which is commonly either 15% or 25% by weight), it is most beneficial in improving resistance to extrusion and cold flow but at the

expense of low breakaway friction and elongation. Care should be taken when selecting any glass fill that the seal does not create an excessive wear problem if the mating surface is aluminum or other relatively soft material.

TETRALON® 720 is formulated without any abrasive fillers and thus overcomes the problems associated with sealing against soft mating surfaces. This material offers an impressive wear ratio of 1000:1 over unfilled TFE as well as thermal stability exceeding that of most conventionally filled TFE. Tetralon® 720 has been qualified as the standard seal material on the B-1 aircraft as well as on many current aircraft systems.

GRAPHITE filler may be compounded with TFE for high load-carrying applications where initial wear and general strengthening characteristics must be provided. It is most often recommended for use in water or water-based fluids.

BRONZE is added to TFE resins and has been shown to increase substantially the wear properties of seals, especially in long-stroke, highly loaded applications. TETRALON® 510 is a proprietary CoorsTek compound, which utilizes a bronze filler, is an excellent bearing material, with the best wear factor of any filled composition known. The designer must be careful when using this material in certain corrosive environments where the bronze may be subjected to chemical attack or in those applications where dielectric strength is critical.

These are a few of the PTFE materials compounded by CoorsTek for seals and bearings applications. In general, the selection of a seal material may be made by the experienced designer, but when there is some question about usage or you desire assistance in the selection, please contact us as early in the design stage as possible. We can provide you with more complete historical data and help get your system design off to a good start.

Consider the MiniGroove®

"MiniGrooving" is an exclusive secondary machining operation used to create very fine multiple peaks and valleys on the circumference of the sealing face. This proprietary process results in high unit loading of the seal even at low force levels to significantly reduce low-pressure leakage. In addition, the grooves act as reservoirs to retain a volume of lubricating fluid, thus minimizing wear.

The MiniGroove feature can be ordered on any CoorsTek rod or piston seal by adding "M" after the basic part number (see design charts).

Side Wall Notches

Side wall notches are an optional feature of CoorsTek

seals. However, we do recommend notches for dynamic seals used in bi-directional pressure applications to assure rapid response of the seal to pressure surges and sudden pressure reversals. Although notches are sometimes recommended on TFE seals to prevent possible side wall sealing, CoorsTek seals are designed with sufficient end clearance so that positive pressure under the seal is maintained. Notching of CoorsTek seals used in single-acting pistons or rod seals is not normally required.

Ordering Information

The installation drawings shown in this catalog contain complete ordering information. Parts that are approved for use by Boeing Airplane Co. may be ordered either by the CoorsTek part number or Boeing part number and the drawing notes consider either selection.

Particular notice should be given to the materials of construction for the various seals. Although material selection and seal configuration are somewhat interdependent, the seal material specified on the drawings is more often the result of our having produced most of that particular configuration in that particular material, obviously because most of the applications demanded it. But a change from, say, MIL-H-5606 hydraulic oil to water as a lubricant could have a significant effect on the choice of material to use for the seal.

CoorsTek has devised a simple, easily identifiable code for changing materials within a given part number. The Material Property chart depicts the more commonly used of some 100 materials used in seal design.

Example: the basic material for Part Number TF731 shown on page 50 is molybdenum-disulfide-filled TFE and, thus, the callout for the -214 size is specified.

TF731-214

If, however, the application called for a food and drug approved material, the designer may use the same configuration but modify the material to virgin TFE:

TF731-214 (000)

For a bronze-impregnated material such as Tetralon®- 510:

TF731-214 (050)

The Material Property chart will go a long way to helping you find the right material for the job. If we can be of any assistance, please call your local distributor or factory Customer Service Representative.

*Teflon is DuPont's Registered Trademark

Material Properties

Material Code	Description	Filler	Tensile Strength ASTM D-1457 (psi)	Elongation ASTM D-1457 (%)	Specific Gravity ASTM D-1457
(000)	Virgin Teflon	None	3500	300	2.15
(010)	AMS 3651	None	1500	75	2.15
(050)	Tetralon [®] 510	Bronze/Other	2200	150	3.12
(052)	TFC-045	Bronze	2000	90	3.75
(053)	TF-619	Bronze/Moly	1800	80	3.60
(300)	Tetralon 720	Polymeric	2300	250	2.04
(430)	Tetralon	None	3500	300	2.15
(440)	Tetralon TFC-031	Glass	2800	250	2.20
(450)	Tetralon TFC-033	Glass	2200	150	2.22
(460)	TFC-086	Glass-Moly	2700	225	2.20
(470)	TFC-618	Glass-Moly	1600	30	2.65
(490)	TFC-082	Glass-Moly	2500	200	2.21
(500)	TFC-033	Glass	2200	150	2.22
(520)	TFC-031	Glass	2800	250	2.20
(530)	TFC-030	Glass	3000	275	2.17
(558)	TFC-025	Carbon-Graphite	1800	100	2.09
(570)	TFC-021	Graphite	2000	140	2.10
(572)	TFC-617	Glass-Graphite	2500	225	2.13
(591)	TFC-616	Moly	3000	250	2.17
(600)	TFC-108	Carbon-Graphite	2000	85	2.04
(611)	TFC-608	Carbon	1800	60	2.05

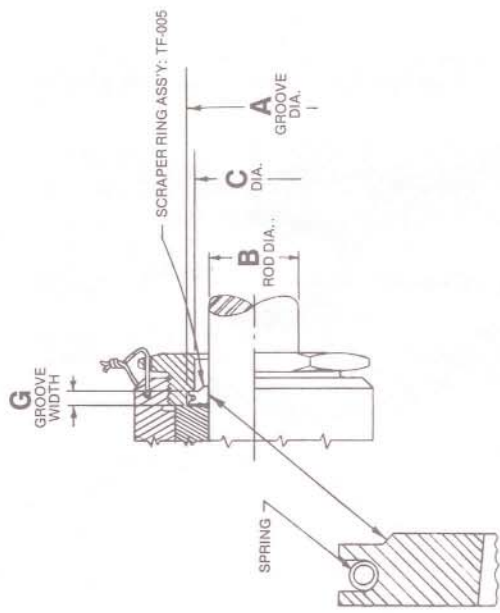
TECHNICAL DATA SECTION

Deformation Under Load ASTM D-621 (%)	Coefficient of Thermal Expansion ASTM D-696 in/in/°F x 10 ⁻⁵	Hardness Shore D	Coefficient of Friction ASTM D-1894		Dielectric Strength ASTM D-149A (V/mil)	Wear Factor K x 10 ⁻¹⁰ in ³ -min lb-ft-hr
			Static	Dynamic		
7.9	6.8	51	.09	.07	1500	15,000
12.0	7.0	53	.09	.08	350	—
3.0	6.3	56	.13	.08	—	3
2.3	4.3	65	.13	.07	—	5
2.0	3.9	62	.13	.09	—	5
3.2	6.4	56	.09	.05	—	5
7.3	6.5	52-58	.07	.06	—	*
4.1	5.7	58	.09	.05	430	6
3.9	4.3	58	.12	.07	320	6
3.9	5.2	60	.10	.05	650	6
2.0	3.2	67	.15	.09	—	8
3.8	5.2	58	.06	.04	—	9
3.9	4.3	58	.12	.07	320	6
4.1	5.7	58	.09	.05	430	7
6.1	6.3	55	.04	.07	—	—
2.0	5.9	64	.09	.08	—	—
2.5	5.9	58-60	.07	.05	—	—
6.6	6.0	56	.09	.05	—	9
5.0	6.4	58	.17	.13	—	8
4.8	6.2	60	.08	.05	—	6
4.6	4.8	62	.16	.13	—	10

Note: These data are shown for information and comparison, and should not be used for design purposes.

*Tetralon is virgin TFE, color coded blue by means of a special dye to differentiate it from conventionally processed TFE. The wear resistant property of Tetralon is at least 10 to 100 times greater than white virgin TFE.

Dash No.	A Dia.		B Dia.		C Dia.		Dash No.	A Dia.		B Dia.		C Dia.	
	+ .004 - .000	+ .000 - .002	+ .000 - .003	+ .000 - .003	+ .005 - .000	+ .005 - .000		+ .005 - .000	+ .005 - .000	+ .000 - .003	+ .000 - .003	+ .005 - .000	+ .005 - .000
3/8	.636	.373	4.927	4.497	4.927	4.497	41	4.927	4.497	4.927	4.497	4.927	4.497
7/16	.697	.435	5.052	4.622	5.052	4.622	42	5.052	4.622	5.052	4.622	5.052	4.622
1	.760	.498	5.177	4.747	5.177	4.747	43	5.177	4.747	5.177	4.747	5.177	4.747
2	.823	.560	5.302	4.872	5.302	4.872	44	5.302	4.872	5.302	4.872	5.302	4.872
3	.885	.623	5.427	4.997	5.427	4.997	45	5.427	4.997	5.427	4.997	5.427	4.997
4	.948	.685	5.552	5.122	5.552	5.122	46	5.552	5.122	5.552	5.122	5.552	5.122
5	1.010	.748	5.677	5.247	5.677	5.247	47	5.677	5.247	5.677	5.247	5.677	5.247
6	1.086	.810	5.802	5.372	5.802	5.372	48	5.802	5.372	5.802	5.372	5.802	5.372
7	1.148	.873	5.927	5.497	5.927	5.497	49	5.927	5.497	5.927	5.497	5.927	5.497
8	1.210	.935	6.114	5.622	6.114	5.622	50	6.114	5.622	6.114	5.622	6.114	5.622
9	1.273	.998	6.239	5.747	6.239	5.747	51	6.239	5.747	6.239	5.747	6.239	5.747
10	1.335	1.060	6.364	5.872	6.364	5.872	52	6.364	5.872	6.364	5.872	6.364	5.872
11	1.398	1.123	6.489	5.997	6.489	5.997	53	6.489	5.997	6.489	5.997	6.489	5.997
12	1.460	1.185	6.614	6.122	6.614	6.122	54	6.614	6.122	6.614	6.122	6.614	6.122
13	1.523	1.248	6.739	6.247	6.739	6.247	55	6.739	6.247	6.739	6.247	6.739	6.247
14	1.614	1.310	6.864	6.372	6.864	6.372	56	6.864	6.372	6.864	6.372	6.864	6.372
15	1.677	1.373	6.989	6.497	6.989	6.497	57	6.989	6.497	6.989	6.497	6.989	6.497
16	1.739	1.435	7.114	6.622	7.114	6.622	58	7.114	6.622	7.114	6.622	7.114	6.622
17	1.802	1.498	7.239	6.747	7.239	6.747	59	7.239	6.747	7.239	6.747	7.239	6.747
18	1.927	1.623	7.364	6.872	7.364	6.872	60	7.364	6.872	7.364	6.872	7.364	6.872
19	2.052	1.748	7.489	6.997	7.489	6.997	61	7.489	6.997	7.489	6.997	7.489	6.997
20	2.177	1.873	7.614	7.122	7.614	7.122	62	7.614	7.122	7.614	7.122	7.614	7.122
21	2.302	1.998	7.739	7.247	7.739	7.247	63	7.739	7.247	7.739	7.247	7.739	7.247
22	2.427	2.123	7.864	7.372	7.864	7.372	64	7.864	7.372	7.864	7.372	7.864	7.372
23	2.552	2.248	7.989	7.497	7.989	7.497	65	7.989	7.497	7.989	7.497	7.989	7.497
24	2.677	2.373	8.114	7.622	8.114	7.622	66	8.114	7.622	8.114	7.622	8.114	7.622
25	2.802	2.498	8.239	7.747	8.239	7.747	67	8.239	7.747	8.239	7.747	8.239	7.747
26	2.989	2.623	8.364	7.872	8.364	7.872	68	8.364	7.872	8.364	7.872	8.364	7.872
27	3.114	2.748	8.489	7.997	8.489	7.997	69	8.489	7.997	8.489	7.997	8.489	7.997
28	3.239	2.873	8.614	8.122	8.614	8.122	70	8.614	8.122	8.614	8.122	8.614	8.122
29	3.364	2.997	8.739	8.247	8.739	8.247	71	8.739	8.247	8.739	8.247	8.739	8.247
30	3.489	3.122	8.864	8.372	8.864	8.372							
31	3.614	3.247	8.989	8.497	8.989	8.497							
32	3.729	3.372	9.114	8.622	9.114	8.622							
33	3.864	3.497	9.239	8.747	9.239	8.747							
34	3.989	3.622	9.364	8.872	9.364	8.872							
35	4.114	3.747	9.489	8.997	9.489	8.997							
36	4.239	3.872	9.614	9.122	9.614	9.122							
37	4.427	3.997	9.739	9.247	9.739	9.247							
38	4.552	4.122	9.864	9.372	9.864	9.372							
39	4.677	4.247	9.989	9.497	9.989	9.497							
40	4.802	4.372	10.114	9.622	10.114	9.622							



Notes:

1. Dash numbers 1 through 71 are dimensionally equivalent to Boeing SCD BACS34A. If ordered under TF 005, they will be supplied in TFE per MIL-R-8791. For other material callouts, see technical data section.
2. Spring is 300 series stainless steel. For other materials, consult factory.
3. Dash numbers are the same as MS-28776.
4. Installation is in accordance with AND 10075/MS33675.
5. Rod diameter from MIL-G-5514.

Dash No.	G Groove Width - .005 - .000
3/8-25	.104
26-36	.119
37-49	.135
50-67	.151
68-71	.166

Ordering Instructions

Example: TF 005-19
 Basic P/N _____
 Size Dash No. _____

Ordering Instructions for Boeing Part No. BACS34A

Example: BACS 34A-19-A or C
 Basic P/N _____
 Size Dash No. _____
 Material _____
 (A-BMS8-121 Type I, GR B, CL I Virgin TFE)
 (C-BMS8-121 Type II, GR B, CL I, 15% Graphite Filled TFE)
 (No Suffix — Material is TFE per MIL-R-8791)



ROD SCRAPER INSTALLATION

TF 005

CODE IDENT.
07128



Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
012	+ .001 - .000	+ .000 - .001	145	+ .002 - .000	+ .000 - .002	336	+ .002 - .000	+ .000 - .002
013	.547	.435	146	2.739	2.561	337	3.245	2.873
014	.610	.498	147	2.801	2.623	338	3.369	2.997
015	.672	.560	148	2.864	2.686	339	3.494	3.122
016	.735	.623	149	2.926	2.748	340	3.619	3.247
017	.797	.685	150	2.989	2.811	341	3.744	3.372
018	.860	.748	151	3.053	.748	342	3.869	3.497
019	.922	.810	152	3.116	.810	343	3.994	3.622
020	.985	.873	153	3.179	.873	344	4.119	3.747
021	1.047	.935	154	3.242	.935	345	4.244	3.872
022	1.110	.998	155	3.305	.998	346	4.369	3.997
023	1.172	1.060	156	3.368	1.060	347	4.494	4.122
024	1.235	1.123	157	3.431	1.123	348	4.619	4.247
025	1.297	1.185	158	3.494	1.185	349	4.744	4.372
026	1.360	1.248	159	3.557	1.248	350	4.869	4.497
027	1.422	1.310	160	3.620	1.310	351	4.994	4.622
028	1.485	1.373	161	3.683	1.373	352	5.119	4.747
110	.551	.373	162	3.746	1.435	353	5.244	4.872
111	.613	.435	163	3.809	1.498	354	5.369	5.000
112	.676	.498	164	3.872	1.560	355	5.494	5.125
113	.738	.560	165	3.935	1.623	356	5.619	5.250
114	.801	.623	166	3.998	1.685	357	5.744	5.375
115	.863	.685	167	4.061	1.748	358	5.869	5.500
116	.926	.748	168	4.124	1.810	359	5.994	5.625
117	.988	.810	169	4.187	1.873	360	6.119	5.750
118	1.051	.873	170	4.250	1.935	361	6.244	5.875
119	1.113	.935	171	4.313	1.998	362	6.369	6.000
120	1.176	.998	172	4.376	2.060	363	6.494	6.125
121	1.238	1.060	173	4.439	2.123	364	6.619	6.250
122	1.301	1.123	174	4.502	2.185	365	6.744	6.375
123	1.363	1.185	175	4.565	2.248	366	6.869	6.500
124	1.426	1.248	176	4.628	2.310	367	6.994	6.625
125	1.488	1.310	177	4.691	2.373	368	7.119	6.750
126	1.551	1.373	178	4.754	2.435	369	7.244	6.875
127	1.613	1.435	179	4.817	2.498	370	7.369	7.000
128	1.676	1.498	180	4.880	2.560	371	7.494	7.125
129	1.738	1.560	181	4.943	2.623	372	7.619	7.250
130	1.801	1.623	182	5.006	2.685	373	7.744	7.375
131	1.863	1.685	183	5.069	2.748	374	7.869	7.500
132	1.926	1.748	184	5.132	2.810	375	7.994	7.625
133	1.988	1.810	185	5.195	2.873	376	8.119	7.750
134	2.051	1.873	186	5.258	2.935	377	8.244	7.875
135	2.114	1.936	187	5.321	2.998	378	8.369	8.000
136	2.176	1.998	188	5.384	3.060	379	8.494	8.125
137	2.239	2.061	189	5.447	3.123	380	8.619	8.250
138	2.301	2.123	190	5.510	3.185	381	8.744	8.375
139	2.364	2.186	191	5.573	3.248	382	8.869	8.500
140	2.426	2.248	192	5.636	3.310	383	8.994	8.625
141	2.489	2.311	193	5.699	3.373	384	9.119	8.750
142	2.551	2.373	194	5.762	3.435	385	9.244	8.875
143	2.614	2.436	195	5.825	3.498	386	9.369	9.000
144	2.676	2.498	196	5.888	3.560	387	9.494	9.125

Dash No.	G Groove Width +.010 -.000	R Groove Radius	E Diametral Clearance Max.
012	.149	.005-.015	.004
013-028	.149	.005-.015	.005
110-126	.183	.005-.015	.005
127-132	.183	.005-.015	.006
133-149	.183	.005-.015	.007
210-222	.235	.010-.025	.005
223-224	.235	.010-.025	.006
225-245	.235	.010-.025	.007
246-247	.235	.010-.025	.008
325-327	.334	.020-.035	.006
328-349	.334	.020-.035	.007
425-438	.475	.020-.035	.009
439-460	.475	.020-.035	.010

Notes:

- This part is supplied in long wearing Tetralon[®], for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same as seal dash size.
- Suitable for use with MIL-P-83461 O-rings in MIL-H-83282 hydraulic fluid as well as with all standard hydraulic fluids and O-ring compounds.
- Sidewall notches optional.
- This part also supplied with Mini grooves[®], add "M" after basic part no. for Minigroove configuration.



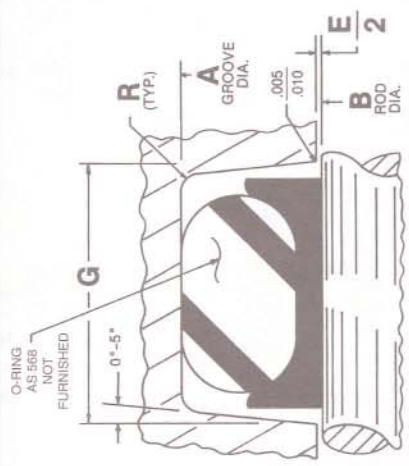
Ordering Instructions

Example: TF 872 M-214N
 Basic P/N
 For Minigroove only
 Size Dash No.
 For optional notches only

**ROD SEAL INSTALLATION
 FOR MIL-G-5514
 (F REVISION)
 NO BACK-UP GLAND
 HEAVY DUTY SERVICE**

CODE IDENT:
07128

TF872



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 - .000	+ .000 - .001		+ .000 - .002	+ .000 - .001		+ .002 - .000	+ .000 - .002		+ .002 - .000	+ .000 - .002
012	.485	.373	145	2.739	2.561	336	3.245	3.073	349	4.869	4.497
013	.547	.435	148	2.926	2.748	339	3.619	3.247	342	4.119	3.747
014	.610	.498	149	2.989	2.811	340	3.744	3.372	344	4.244	3.872
015	.672	.560	150	3.172	2.994	341	3.869	3.497	345	4.369	3.997
016	.735	.623	151	3.355	3.177	342	3.994	3.622	346	4.494	4.122
017	.797	.685	152	3.538	3.360	343	4.119	3.747	347	4.619	4.247
018	.860	.748	153	3.721	3.543	344	4.244	3.872	348	4.744	4.372
019	.922	.810	154	3.904	3.726	345	4.369	3.997	349	4.869	4.497
020	.985	.873	155	4.087	3.909	346	4.494	4.122			
021	1.047	.935	156	4.270	4.092	347	4.619	4.247			
022	1.110	.998	157	4.453	4.275	348	4.744	4.372			
023	1.172	1.060	158	4.636	4.458	349	4.869	4.497			
024	1.235	1.123	159	4.819	4.641						
025	1.297	1.185	160	5.002	4.824						
026	1.360	1.248	161	5.185	5.007						
027	1.422	1.310	162	5.368	5.190						
028	1.485	1.373	163	5.551	5.373						
110	.551	.373	224	1.991	1.748	427	5.224	4.747			
111	.613	.435	225	2.116	2.873	428	5.349	4.872			
112	.676	.498	226	2.241	2.998	429	5.474	4.997			
113	.738	.560	227	2.366	2.998	430	5.599	5.122			
114	.801	.623	228	2.491	2.248	431	5.724	5.247			
115	.863	.685	229	2.616	2.248	432	5.849	5.372			
116	.926	.748	230	2.741	2.498	433	5.974	5.497			
117	.988	.810	231	2.866	2.623	434	6.099	5.622			
118	1.051	.873	232	2.991	2.748	435	6.224	5.747			
119	1.113	.935	233	3.116	2.873	436	6.349	5.872			
120	1.176	.998	234	3.241	2.873	437	6.474	5.997			
121	1.238	1.060	235	3.366	2.997	438	6.599	6.122			
122	1.301	1.123	236	3.491	3.122	439	6.724	6.247			
123	1.363	1.185	237	3.615	3.247	440	6.849	6.372			
124	1.426	1.248	238	3.740	3.372	441	6.974	6.497			
125	1.488	1.310	239	3.865	3.497	442	7.099	6.622			
126	1.551	1.373	240	3.990	3.622	443	7.224	6.747			
127	1.613	1.435	241	4.115	3.747	444	7.349	6.872			
128	1.676	1.498	242	4.240	3.872	445	7.474	6.997			
129	1.738	1.560	243	4.365	3.997	446	7.599	7.122			
130	1.801	1.623	244	4.490	4.122						
131	1.863	1.685	245	4.615	4.247						
132	1.926	1.748	246	4.740	4.372	447	9.474	8.997			
133	1.988	1.810	247	4.865	4.497	448	9.599	9.122			
134	2.051	1.873	248	4.990	4.622	449	9.724	9.247			
135	2.114	1.936	249	5.115	4.747	450	9.849	9.372			
136	2.176	1.998	250	5.240	4.872	451	9.974	9.497			
137	2.239	2.061	251	5.365	4.997	452	10.099	9.622			
138	2.301	2.123	252	5.490	5.122	453	10.224	9.747			
139	2.364	2.186	253	5.615	5.247	454	10.349	9.872			
140	2.426	2.248	254	5.740	5.372	455	10.474	9.997			
141	2.488	2.311	255	5.865	5.497	456	10.599	10.122			
142	2.551	2.373	256	5.990	5.622	457	10.724	10.247			
143	2.614	2.436	257	6.115	5.747	458	10.849	10.372			
144	2.676	2.498	258	6.240	5.872	459	10.974	10.497			
			259	6.365	5.997	460	11.099	10.622			

Dash No.	G Groove Width +.010 -.000	R Groove Radius	E Diametral Clearance Max.
012	.207	.005-.015	.004
013-028	.207	.005-.015	.005
110-126	.245	.005-.015	.005
127-132	.245	.005-.015	.006
133-149	.245	.005-.015	.007
210-222	.304	.010-.025	.005
223-224	.304	.010-.025	.006
225-245	.304	.010-.025	.007
246-247	.304	.010-.025	.008
325-327	.424	.020-.035	.006
328-349	.424	.020-.035	.007
425-438	.579	.020-.035	.009
439-460	.579	.020-.035	.010

Notes:

- This part is supplied in long wearing 'Tetraon', for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same as seal dash size.
- Suitable for use with MIL-P-83461 O-rings in MIL-H-83282 hydraulic fluid as well as with all standard hydraulic fluids and O-ring compounds.
- Sidewall notches optional.
- This part also supplied with Mini grooves[®], add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

Example: TF 238 M-214N
 Basic P/N TF 238 M-214N
 For Minigroove only
 Size Dash No.
 For optional notches only

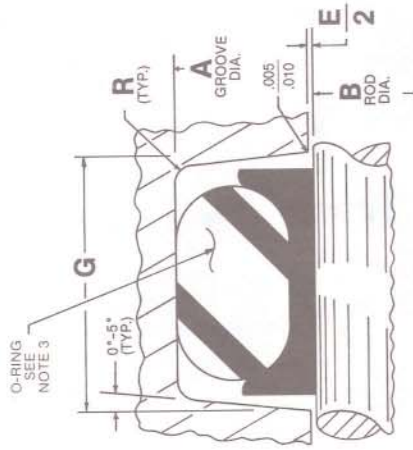


ROD SEAL INSTALLATION FOR MIL-G-5514 (F REVISION) NO BACK-UP GLAND HEAVY DUTY SERVICE

CODE IDENT.
07128

TF238

Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 - .000	+ .000 - .001		+ .000 - .002	+ .000 - .002
012	+ .002 - .000	2.743 2.805 2.868 2.930 2.993	145 146 147 148 149	2.743 2.627 2.690 2.752 2.815	+ .002 - .002
013	.550	.438	150	.748	.873
014	.613	.501	151	.991	.873
015	.675	.563	152	1.053	.935
016	.738	.626	153	1.116	.998
017	.800	.688	154	1.178	1.060
018	.863	.751	155	1.241	1.123
019	.925	.813	156	1.303	1.185
020	.993	.881	157	1.366	1.248
021	1.055	.943	158	1.428	1.311
022	1.118	1.006	159	1.491	1.374
023	1.180	1.068	160	1.553	1.437
024	1.243	1.131	161	1.616	1.499
025	1.305	1.193	162	1.678	1.562
026	1.368	1.256	163	1.741	1.625
027	1.430	1.318	164	1.803	1.687
028	1.493	1.381	165	1.866	1.750
110	.551	.373	166	1.928	1.812
111	.613	.435	167	2.011	1.875
112	.676	.498	168	2.073	1.937
113	.738	.560	169	2.136	2.000
114	.801	.623	170	2.198	2.062
115	.863	.685	171	2.261	2.125
116	.926	.748	172	2.323	2.187
117	.993	.815	173	2.386	2.250
118	1.056	.878	174	2.448	2.312
119	1.118	.940	175	2.511	2.375
120	1.181	1.003	176	2.573	2.437
121	1.243	1.065	177	2.636	2.500
122	1.306	1.128	178	2.698	2.562
123	1.368	1.190	179	2.761	2.625
124	1.431	1.253	180	2.823	2.687
125	1.493	1.315	181	2.886	2.750
126	1.556	1.380	182	2.948	2.812
127	1.620	1.442	183	3.011	2.875
128	1.683	1.505	184	3.073	2.937
129	1.746	1.568	185	3.136	2.999
130	1.809	1.631	186	3.198	3.062
131	1.872	1.694	187	3.261	3.125
132	1.935	1.757	188	3.323	3.187
133	1.998	1.820	189	3.386	3.250
134	2.061	1.883	190	3.448	3.312
135	2.124	1.946	191	3.511	3.375
136	2.187	2.009	192	3.573	3.437
137	2.250	2.072	193	3.636	3.500
138	2.313	2.135	194	3.698	3.562
139	2.376	2.198	195	3.761	3.625
140	2.439	2.261	196	3.823	3.687
141	2.502	2.324	197	3.886	3.750
142	2.565	2.387	198	3.948	3.812
143	2.628	2.450	199	4.011	3.875
144	2.691	2.513	200	4.073	3.937



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.094	.005-.015	.004
013-028	.094	.005-.015	.005
110-149	.141	.005-.015	.005
210-247	.188	.010-.025	.006
325-349	.281	.020-.030	.007
425-460	.375	.020-.030	.010

Notes:

- This part is supplied in long wearing Tetralon[®], for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same as seal dash size.
- Suitable for use with MIL-P-83461 Tetralon in MIL-H-83282 hydraulic fluid
- Sidewall notches optional.
- This part also supplied with Mini grooves; add "M" after basic part no. for Minigroove configuration.

as well as with all standard hydraulic fluids and O-ring compounds.

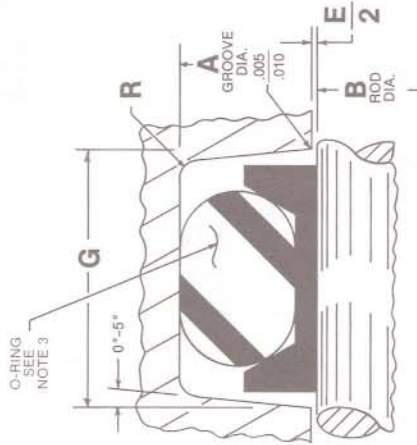
Ordering Instructions



ROD SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) NO BACK-UP GLAND HEAVY DUTY SERVICE

CODE IDENT. **07128**

TF 875



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
004-012	.094	.005-.015	.004
110-116	.141	.005-.015	.005
210-222	.188	.010-.020	.006
325-349	.281	.020-.030	.007
425-460	.375	.020-.030	.008

Notes

- This part is supplied in virgin TFE. For other material callouts, refer to Technical Data section.
- Dash nos. correspond to those of AS 568.
- O-ring supplied on request. Size is same as seal size.
- Parts Dash Nos. 110 thru 116; 210 thru 222 and 325 thru 349 conform to Boeing SCD BACR12AT and are supplied in VTFE per AMS 3651.
- Sidewall notches optional.
- This part also supplied with Minigrooves[®]; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

Ordering Instructions for
Boeing Part Number
BACR12AT (See Note 4)
Example: BACR12AT-214

Basic P/N _____
Size Dash No. _____



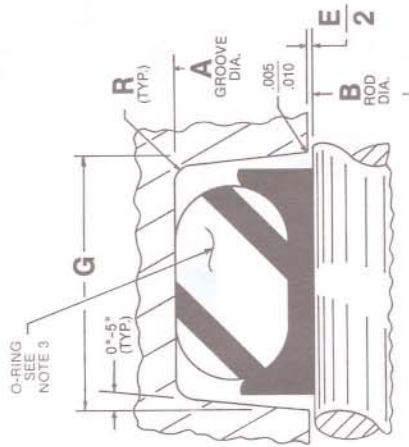
**ROD SEAL INSTALLATION
FOR MIL-P-5514
(C, D & E REVISIONS)
NO BACK-UP GLAND**

CODE IDENT.

07128

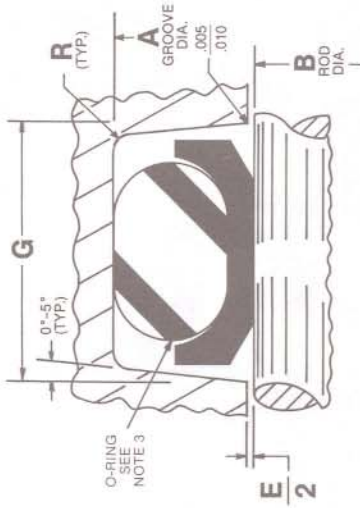
TF 393

Dash No.	A Dia.		Dash No.	A Dia.		Dash No.	A Dia.	
	+ .002	- .000		+ .002	- .000		+ .002	- .000
014	.613	.501	222	1.741	1.498	344	4.244	3.872
015	.675	.563	223	1.868	1.625	345	4.369	3.997
016	.738	.626	224	1.993	1.750	346	4.494	4.122
017	.800	.688	225	2.118	1.875	347	4.619	4.247
018	.863	.751	226	2.243	2.000	348	4.744	4.372
019	.925	.813	227	2.368	2.125	349	4.869	4.497
020	.993	.881	228	2.493	2.250		+ .003	+ .000
021	1.055	.943	229	2.618	2.375		- .000	- .003
022	1.118	1.006	230	2.743	2.500	425	4.974	4.497
023	1.180	1.068	231	2.868	2.625	426	5.099	4.622
024	1.243	1.131	232	2.993	2.750	427	5.224	4.747
025	1.305	1.193	233	3.118	2.875	428	5.349	4.872
026	1.368	1.256	234	3.243	3.000	429	5.474	4.997
027	1.430	1.318						
028	1.493	1.381	235	3.368	3.125	430	5.599	5.122
			236	3.493	3.250	431	5.724	5.247
110	.551	.373	237	3.618	3.375	432	5.849	5.372
111	.613	.435	238	3.743	3.500	433	5.974	5.497
112	.676	.498	239	3.868	3.625	434	6.099	5.622
113	.738	.560	240	3.993	3.750	435	6.224	5.747
114	.801	.623	241	4.118	3.875	436	6.349	5.872
115	.863	.685	242	4.243	4.000	437	6.474	5.997
116	.926	.748	243	4.368	4.125	438	6.624	6.247
117	.993	.815	244	4.493	4.250	439	6.974	6.497
118	1.056	.878	245	4.618	4.375	440	7.224	6.747
119	1.118	.940	246	4.743	4.500	441	7.474	6.997
120	1.181	1.003	247	4.868	4.625	442	7.724	7.247
121	1.243	1.065	325	1.870	1.498	443	7.974	7.497
122	1.306	1.128	326	1.995	1.623	444	8.224	7.747
123	1.368	1.190	327	2.120	1.748	445	8.474	7.997
124	1.431	1.253	328	2.245	1.873	446	8.974	8.497
125	1.493	1.315	329	2.370	1.998	447	9.474	8.997
126	1.558	1.380	330	2.495	2.123	448	9.974	9.497
127	1.620	1.442	331	2.620	2.248	449	10.474	9.997
210	.991	.748	332	2.745	2.373	450	10.974	10.497
211	1.053	.810	333	2.870	2.498	451	11.474	10.997
212	1.116	.873	334	2.995	2.623	452	11.974	11.497
213	1.178	.935	335	3.120	2.748	453	12.474	11.997
214	1.241	.998	336	3.245	2.873	454	12.974	12.497
215	1.303	1.060	337	3.369	2.997	455	13.474	12.997
216	1.366	1.123	338	3.494	3.122	456	13.974	13.497
217	1.428	1.185	339	3.619	3.247	457	14.474	13.997
218	1.491	1.248	340	3.744	3.372	458	14.974	14.497
219	1.553	1.310	341	3.869	3.497	459	15.474	14.997
220	1.616	1.373	342	3.994	3.622	460	15.974	15.497
221	1.678	1.435	343	4.119	3.747			



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001	- .000		+ .000	- .002		+ .000	- .000		+ .000	- .002
012	.485	.373	145	2.743	2.565	386	3.245	2.873	425	4.974	4.497
013	.550	.438	146	2.805	2.627	337	3.369	2.997	426	5.099	4.622
014	.613	.501	147	2.868	2.690	338	3.494	3.122	427	5.224	4.747
015	.675	.563	148	2.930	2.752	339	3.619	3.247	428	5.349	4.872
016	.738	.626	149	.991	.748	340	3.744	3.372	429	5.474	4.997
017	.800	.688	210	1.053	.810	341	3.869	3.497	430	5.599	5.122
018	.863	.751	211	1.116	.873	342	3.994	3.622	431	5.724	5.247
019	.925	.813	212	1.178	.935	343	4.119	3.747	432	5.849	5.372
020	.988	.876	213	1.241	.998	344	4.244	3.872	433	5.974	5.497
021	1.051	.939	214	1.303	1.060	345	4.369	3.997	434	6.099	5.622
022	1.114	1.002	215	1.366	1.080	346	4.494	4.122	435	6.224	5.747
023	1.177	1.065	216	1.428	1.123	347	4.619	4.247	436	6.349	5.872
024	1.240	1.128	217	1.491	1.185	348	4.744	4.372	437	6.474	5.997
025	1.303	1.191	218	1.553	1.248	349	4.869	4.497	438	6.624	6.247
026	1.366	1.254	219	1.616	1.310	425	4.974	4.497	439	6.974	6.497
027	1.429	1.317	220	1.678	1.373	426	5.099	4.622	440	7.224	6.747
028	1.492	1.380	221	1.741	1.435	427	5.224	4.747	441	7.474	6.997
029	1.555	1.443	222	1.803	1.498	428	5.349	4.872	442	7.724	7.247
030	1.618	1.506	223	1.866	1.560	429	5.474	4.997	443	7.974	7.497
031	1.681	1.569	224	1.928	1.623	430	5.599	5.122	444	8.224	7.747
032	1.744	1.632	225	1.991	1.685	431	5.724	5.247	445	8.474	7.997
033	1.807	1.695	226	2.053	1.748	432	5.849	5.372	446	8.724	8.247
034	1.870	1.758	227	2.116	1.810	433	5.974	5.497	447	8.974	8.497
035	1.933	1.821	228	2.178	1.873	434	6.099	5.622	448	9.224	8.747
036	1.996	1.884	229	2.241	1.935	435	6.224	5.747	449	9.474	8.997
037	2.059	1.947	230	2.303	1.998	436	6.349	5.872	450	10.474	10.997
038	2.122	2.010	231	2.366	2.060	437	6.474	5.997	451	10.974	10.997
039	2.185	2.073	232	2.428	2.123	438	6.624	6.247	452	11.474	11.497
040	2.248	2.136	233	2.491	2.185	439	6.744	6.497	453	11.974	11.997
041	2.311	2.199	234	2.553	2.248	440	6.869	6.747	454	12.474	12.497
042	2.374	2.262	235	2.616	2.310	441	6.994	6.997	455	12.974	12.997
043	2.437	2.325	236	2.678	2.373	442	7.119	7.247	456	13.474	13.497
044	2.500	2.388	237	2.741	2.435	443	7.244	7.497	457	13.974	13.997
045	2.563	2.451	238	2.803	2.498	444	7.369	7.747	458	14.474	14.497
046	2.626	2.514	239	2.866	2.560	445	7.494	7.997	459	14.974	14.997
047	2.689	2.577	240	2.928	2.623	446	7.619	8.247	460	15.474	15.497
048	2.752	2.640	241	2.991	2.685		7.744	8.497			
049	2.815	2.703	242	3.053	2.748		7.869	8.747			
050	2.878	2.766	243	3.116	2.810		7.994	8.997			
051	2.941	2.829	244	3.178	2.873		8.119	9.247			
052	3.004	2.892	245	3.241	2.935		8.244	9.497			
053	3.067	2.955	246	3.303	2.998		8.369	9.747			
054	3.130	3.018	247	3.366	3.060		8.494	9.997			
055	3.193	3.081	248	3.428	3.123		8.619	10.247			
056	3.256	3.144	249	3.491	3.185		8.744	10.497			
057	3.319	3.207	250	3.553	3.248		8.869	10.747			
058	3.382	3.270	251	3.616	3.310		8.994	10.997			
059	3.445	3.333	252	3.678	3.373		9.119	11.247			
060	3.508	3.396	253	3.741	3.435		9.244	11.497			
061	3.571	3.459	254	3.803	3.498		9.369	11.747			
062	3.634	3.522	255	3.866	3.560		9.494	11.997			
063	3.697	3.585	256	3.928	3.623		9.619	12.247			
064	3.760	3.648	257	3.991	3.685		9.744	12.497			
065	3.823	3.711	258	4.053	3.748		9.869	12.747			
066	3.886	3.774	259	4.116	3.810		9.994	12.997			
067	3.949	3.837	260	4.178	3.873		10.119	13.247			
068	4.012	3.899	261	4.241	3.935		10.244	13.497			
069	4.075	3.962	262	4.303	3.998		10.369	13.747			
070	4.138	4.025	263	4.366	4.060		10.494	13.997			
071	4.201	4.088	264	4.428	4.123		10.619	14.247			
072	4.264	4.151	265	4.491	4.185		10.744	14.497			
073	4.327	4.214	266	4.553	4.248		10.869	14.747			
074	4.390	4.277	267	4.616	4.310		10.994	14.997			
075	4.453	4.340	268	4.678	4.373		11.119	15.247			
076	4.516	4.403	269	4.741	4.435		11.244	15.497			
077	4.579	4.466	270	4.803	4.498		11.369	15.747			
078	4.642	4.529	271	4.866	4.560		11.494	15.997			
079	4.705	4.592	272	4.928	4.623		11.619	16.247			
080	4.768	4.655	273	4.991	4.685		11.744	16.497			
081	4.831	4.718	274	5.053	4.748		11.869	16.747			
082	4.894	4.781	275	5.116	4.810		11.994	16.997			
083	4.957	4.844	276	5.178	4.873		12.119	17.247			
084	5.020	4.907	277	5.241	4.935		12.244	17.497			
085	5.083	4.970	278	5.303	4.998		12.369	17.747			
086	5.146	5.033	279	5.366	5.060		12.494	17.997			
087	5.209	5.096	280	5.428	5.123		12.619	18.247			
088	5.272	5.159	281	5.491	5.185		12.744	18.497			
089	5.335	5.222	282	5.553	5.248		12.869	18.747			
090	5.398	5.285	283	5.616	5.310		12.994	18.997			
091	5.461	5.348	284	5.678	5.373		13.119	19.247			
092	5.524	5.411	285	5.741	5.435		13.244	19.497			
093	5.587	5.474	286	5.803	5.498		13.369	19.747			
094	5.650	5.537	287	5.866	5.560		13.494	19.997			
095	5.713	5.600	288	5.928	5.623		13.619	20.247			
096	5.776	5.663	289	5.991	5.685		13.744	20.497			
097	5.839	5.726	290	6.053	5.748		13.869	20.747			
098	5.902	5.789	291	6.116	5.810		13.994	20.997			
099	5.965	5.852	292	6.178	5.873		14.119	21.247			
100	6.028	5.915	293	6.241	5.935		14.244	21.497			
101	6.091	5.978	294	6.303	5.998		14.369	21.747			
102	6.154	6.041	295	6.366	6.060		14.494	21.997			
103	6.217	6.104	296	6.428	6.123		14.619	22.247			
104	6.280	6.167	297	6.491	6.185		14.744	22.497			
105	6.343	6.230	298	6.553	6.248		14.869	22.747			
106	6.406	6.293	299	6.616	6.310		14.994	22.997			
107	6.469	6.356	300	6.678	6.373		15.119	23.247			
108	6.532	6.419	301	6.741	6.435		15.244	23.497			
109	6.595	6.482	302	6.803	6.498		15.369	23.747			
110	6.658	6.545	303	6.866	6.560		15.494	23.997			
111	6.721	6.608	304	6.928	6.623		15.619	24.247			
112	6.784	6.671	305	6.991	6.685		15.744	24.497			
113	6.847</										

Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .002	- .001		+ .002	- .001		+ .002	- .001		+ .002	- .001
006	.235	.123	141	2.493	2.315	334	4.974	4.497			
007	.266	.154	142	2.555	2.377	335	5.099	4.622			
008	.297	.185	143	2.618	2.440	336	5.224	4.747			
009	.329	.217	144	2.680	2.502	337	5.349	4.872			
010	.360	.248	145	2.743	2.565	338	5.474	4.997			
011	.422	.310	146	2.805	2.627	339	5.599	5.122			
012	.485	.373	147	2.868	2.690	340	5.724	5.247			
			148	2.930	2.752	341	5.849	5.372			
			149	2.993	2.815	342	5.974	5.497			
013	.550	.438	210	.991	.748	343	6.224	5.747			
014	.613	.501	211	1.053	.810	344	6.349	5.872			
015	.675	.563	212	1.116	.873	345	6.474	5.997			
016	.738	.626	213	1.178	.935	346	6.624	6.247			
017	.800	.688	214	1.241	.998	347	6.974	6.497			
018	.863	.751	215	1.303	1.060	348	7.224	6.747			
019	.925	.813	216	1.366	1.123	349	7.474	6.997			
020	.987	.875	217	1.428	1.185		7.724	7.247			
021	1.050	.937	218	1.491	1.248		7.974	7.497			
022	1.112	1.000	219	1.553	1.310	425	8.224	7.747			
023	1.174	1.062	220	1.616	1.373	426	8.474	7.997			
024	1.236	1.124	221	1.678	1.435	427	8.724	8.247			
025	1.298	1.186	222	1.741	1.498	428	8.974	8.497			
026	1.360	1.248	223	1.803	1.560	429	9.224	8.747			
027	1.422	1.310	224	1.865	1.622	430	9.474	8.997			
028	1.484	1.372	225	1.927	1.684	431	9.724	9.247			
110	.551	.373	226	2.243	2.000	432	9.974	9.497			
111	.613	.435	227	2.368	2.125	433	10.224	9.747			
112	.675	.497	228	2.493	2.250	434	10.474	9.997			
113	.738	.560	229	2.618	2.375	435	10.724	10.247			
114	.800	.623	230	2.743	2.500	436	10.974	10.497			
115	.863	.685	231	2.868	2.625	437	11.224	10.747			
116	.925	.748	232	2.993	2.750	438	11.474	10.997			
117	.987	.810	233	3.118	2.875	439	11.724	11.247			
118	1.050	.872	234	3.243	3.000	440	11.974	11.497			
119	1.112	.934	235	3.368	3.125	441	12.224	11.747			
120	1.174	1.000	236	3.493	3.250	442	12.474	11.997			
121	1.236	1.062	237	3.618	3.375	443	12.724	12.247			
122	1.298	1.124	238	3.743	3.500	444	12.974	12.497			
123	1.360	1.186	239	3.868	3.625	445	13.224	12.747			
124	1.422	1.248	240	3.993	3.750	446	13.474	12.997			
125	1.484	1.310	241	4.118	3.875	447	13.724	13.247			
126	1.546	1.372	242	4.243	4.000	448	13.974	13.497			
127	1.608	1.434	243	4.368	4.125	449	14.224	13.747			
128	1.670	1.496	244	4.493	4.250	450	14.474	13.997			
129	1.732	1.558	245	4.618	4.375	451	14.724	14.247			
130	1.794	1.620	246	4.743	4.500	452	14.974	14.497			
131	1.856	1.682	247	4.868	4.625	453	15.224	14.747			
132	1.918	1.744	248	4.993	4.750	454	15.474	14.997			
133	1.980	1.806	249	5.118	4.875	455	15.724	15.247			
134	2.042	1.868	250	5.243	5.000	456	15.974	15.497			
135	2.104	1.930	251	5.368	5.125	457					
136	2.166	1.992	252	5.493	5.250	458					
137	2.228	2.054	253	5.618	5.375	459					
138	2.290	2.116	254	5.743	5.500	460					
139	2.352	2.178	255	5.868	5.625						
140	2.414	2.240	256	5.993	5.750						
			257	6.118	5.875						
			258	6.243	6.000						
			259	6.368	6.125						
			260	6.493	6.250						
			261	6.618	6.375						
			262	6.743	6.500						
			263	6.868	6.625						
			264	6.993	6.750						
			265	7.118	6.875						
			266	7.243	7.000						
			267	7.368	7.125						
			268	7.493	7.250						
			269	7.618	7.375						
			270	7.743	7.500						
			271	7.868	7.625						
			272	7.993	7.750						
			273	8.118	7.875						
			274	8.243	8.000						
			275	8.368	8.125						
			276	8.493	8.250						
			277	8.618	8.375						
			278	8.743	8.500						
			279	8.868	8.625						
			280	8.993	8.750						
			281	9.118	8.875						
			282	9.243	9.000						
			283	9.368	9.125						
			284	9.493	9.250						
			285	9.618	9.375						
			286	9.743	9.500						
			287	9.868	9.625						
			288	9.993	9.750						
			289	10.118	9.875						
			290	10.243	10.000						
			291	10.368	10.125						
			292	10.493	10.250						
			293	10.618	10.375						
			294	10.743	10.500						
			295	10.868	10.625						
			296	10.993	10.750						
			297	11.118	10.875						
			298	11.243	11.000						
			299	11.368	11.125						
			300	11.493	11.250						
			301	11.618	11.375						
			302	11.743	11.500						
			303	11.868	11.625						
			304	11.993	11.750						
			305	12.118	11.875						
			306	12.243	12.000						
			307	12.368	12.125						
			308	12.493	12.250						
			309	12.618	12.375						
			310	12.743	12.500						
			311	12.868	12.625						
			312	12.993	12.750						
			313	13.118	12.875						
			314	13.243	13.000						
			315	13.368	13.125						
			316	13.493	13.250						
			317	13.618	13.375						
			318	13.743	13.500						
			319	13.868	13.625						
			320	13.993	13.750						
			321	14.118	13.875						
			322	14.243	14.000						
			323	14.368	14.125						
			324	14.493	14.250						
			325	14.618	14.375						
			326	14.743	14.500						
			327	14.868	14.625						
			328	14.993	14.750						
			329	15.118	14.875						
			330	15.243	15.000						
			331	15.368	15.125						
			332	15.493	15.250						
			333	15.618	15.375						
			334	15.743	15.500						
			335	15.868	15.625						
			336	15.993	15.750						
			337	16.118	15.875						
			338	16.243	16.000						
			339	16.368	16.125						
			340	16.493	16.250						



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diameter Clearance Max.
004-012	.094	.005-.015	.004
210-222	.141	.005-.015	.005
325-349	.188	.010-.025	.006
425-460	.281	.020-.030	.007
	.375	.020-.030	.010

Notes:

- This part is supplied in virgin TFE. For other material callouts, refer to Technical Data section.
- Dash nos. correspond to those of AS 568.
- O-ring supplied on request. Size is same as seal size.
- Sidewall notches optional.
- This part also supplied with Minigrooves[®]; add "M" after basic part no. for Minigroove configuration.
- Dash nos. 006 thru 012, 110 thru 116, 210 thru 222 and 325 thru 349 conform to Boeing SCD BACR12BD.

Ordering Instructions

Ordering Instructions for Boeing Part Number BACR12BD (See Note 6)

Example: BACR12BD-214N-AorB
 Basic P/N _____
 Size Dash No. _____
 For Optional Notches Only
 Material Code _____
 A-BMSS-121 Typ. 1, GR.B, CL. 1
 B-MIL-R-8791

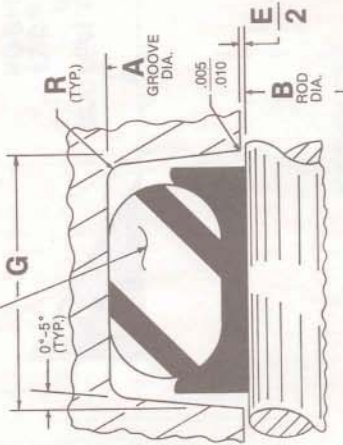


ROD SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) NO BACK-UP GLAND

CODE IDENT. 07128

TF 452

Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 - .000	+ .000 - .001		+ .002 - .000	+ .000 - .001		+ .002 - .000	+ .000 - .001		+ .002 - .000	+ .000 - .001
012	.485	.373	145	2.743	2.565	336	3.245	3.067	337	3.369	3.191
013	.550	.438	146	2.805	2.627	338	3.494	3.316	339	3.619	3.441
014	.613	.501	147	2.930	2.752	340	3.744	3.566	341	3.869	3.691
015	.675	.563	148	2.993	2.815	342	3.894	3.716	343	4.019	3.841
016	.738	.626	149	3.056	2.878	344	4.119	3.941	345	4.244	4.066
017	.800	.688	150	3.119	2.941	346	4.244	4.066	347	4.369	4.191
018	.863	.751	151	3.182	2.993	348	4.374	4.191	349	4.494	4.316
019	.925	.813	152	3.245	3.056	350	4.519	4.336	351	4.619	4.441
020	.988	.876	153	3.308	3.119	352	4.644	4.461	353	4.744	4.566
021	1.051	.939	154	3.371	3.182	354	4.789	4.606	355	4.869	4.691
022	1.114	1.002	155	3.434	3.245	356	4.914	4.731	357	5.014	4.816
023	1.177	1.065	156	3.497	3.308	358	5.039	4.856	359	5.139	4.941
024	1.240	1.128	157	3.560	3.371	360	5.184	4.991	361	5.264	5.066
025	1.303	1.191	158	3.623	3.434	362	5.309	5.116	363	5.389	5.191
026	1.366	1.254	159	3.686	3.497	364	5.434	5.241	365	5.514	5.316
027	1.429	1.317	160	3.749	3.560	366	5.559	5.366	367	5.639	5.441
028	1.492	1.380	161	3.812	3.623	368	5.684	5.491	369	5.764	5.566
110	.551	.439	162	3.875	3.686	370	5.809	5.626	371	5.889	5.711
111	.613	.501	163	3.938	3.749	372	5.934	5.751	373	6.014	5.836
112	.675	.563	164	4.001	3.812	374	6.059	5.876	375	6.139	5.961
113	.738	.626	165	4.064	3.875	376	6.184	5.991	377	6.264	6.086
114	.800	.688	166	4.127	3.938	378	6.309	6.116	379	6.389	6.211
115	.863	.751	167	4.190	3.991	380	6.434	6.241	381	6.514	6.336
116	.925	.813	168	4.253	4.054	382	6.559	6.366	383	6.639	6.461
117	.988	.876	169	4.316	4.117	384	6.684	6.491	385	6.764	6.586
118	1.051	.939	170	4.379	4.180	386	6.809	6.616	387	6.889	6.711
119	1.114	1.002	171	4.442	4.243	388	6.934	6.741	389	7.014	6.836
120	1.177	1.065	172	4.505	4.306	390	7.059	6.866	391	7.139	6.961
121	1.240	1.128	173	4.568	4.369	392	7.184	6.991	393	7.264	7.086
122	1.303	1.191	174	4.631	4.432	394	7.309	7.116	395	7.389	7.211
123	1.366	1.254	175	4.694	4.495	396	7.434	7.241	397	7.514	7.336
124	1.429	1.317	176	4.757	4.558	398	7.559	7.366	399	7.639	7.461
125	1.492	1.380	177	4.820	4.621	400	7.684	7.491	401	7.764	7.586
126	1.555	1.443	178	4.883	4.684	402	7.809	7.616	403	7.889	7.711
127	1.618	1.506	179	4.946	4.747	404	7.934	7.741	405	8.014	7.836
128	1.681	1.569	180	5.009	4.810	406	8.059	7.866	407	8.139	7.961
129	1.744	1.632	181	5.072	4.873	408	8.184	7.991	409	8.264	8.086
130	1.807	1.695	182	5.135	4.936	410	8.309	8.116	411	8.389	8.211
131	1.870	1.758	183	5.198	4.999	412	8.434	8.241	413	8.514	8.336
132	1.933	1.821	184	5.261	5.062	414	8.559	8.366	415	8.639	8.461
133	1.996	1.884	185	5.324	5.125	416	8.684	8.491	417	8.764	8.586
134	2.059	1.947	186	5.387	5.188	418	8.809	8.616	419	8.889	8.711
135	2.122	2.010	187	5.450	5.251	420	8.934	8.741	421	9.014	8.836
136	2.185	2.073	188	5.513	5.314	422	9.059	8.866	423	9.139	8.961
137	2.248	2.136	189	5.576	5.377	424	9.184	8.991	425	9.264	9.086
138	2.311	2.199	190	5.639	5.440	426	9.309	9.116	427	9.389	9.211
139	2.374	2.262	191	5.702	5.503	428	9.434	9.241	429	9.514	9.336
140	2.437	2.325	192	5.765	5.566	430	9.559	9.366	431	9.639	9.461
141	2.500	2.388	193	5.828	5.629	432	9.684	9.491	433	9.764	9.586
142	2.563	2.451	194	5.891	5.692	434	9.809	9.616	435	9.889	9.711
143	2.626	2.514	195	5.954	5.755	436	9.934	9.741	437	10.014	9.836
144	2.689	2.577	196	6.017	5.818	438	10.059	9.866	439	10.139	9.961



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.149	.005-.015	.004
013-028	.149	.005-.015	.005
110-149	.183	.005-.015	.005
210-247	.225	.010-.025	.006
325-349	.334	.020-.030	.007
425-460	.440	.020-.030	.010

Notes:
 1. This part is supplied in long wearing Tetralon[®]; for other material callouts refer to Technical Data section.
 2. Dash numbers correspond to AS568.
 3. O-ring supplied on request. Size is same as seal dash size.
 4. Suitable for use with MIL-P-83461 O-rings in MIL-H-83282 hydraulic fluid as well as with all standard hydraulic fluids and O-ring compounds.
 5. Sidewall notches optional.
 6. This part also supplied with Mini grooves; add "M" after basic part no. for Mini groove configuration.

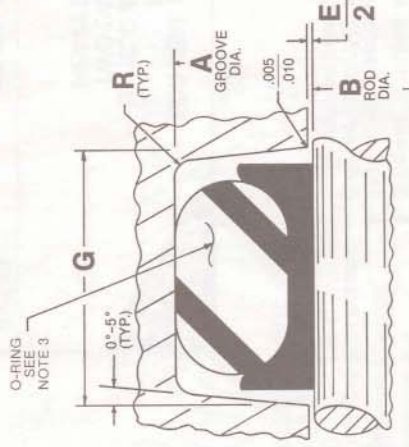
Ordering Instructions



ROD SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) ONE BACK-UP GLAND HEAVY DUTY SERVICE

CODE IDENT.
07128

TF 931



Dash No.	A Dia.		B Dia.		Dash No.	A Dia.		B Dia.	
	+ .001 - .000	.485 + .002 - .002	+ .000 - .001	.373		+ .002 - .000	.743	+ .000 - .002	2.565
012					145	2.743	2.565	336	3.245
					146	2.805	2.627	337	3.369
					147	2.868	2.690	338	3.494
					148	2.930	2.752	339	3.619
					149	2.993	2.815	340	3.744
013	.550	.438			341	.991	.748	341	3.869
014	.613	.501			342	1.053	.810	342	3.994
015	.675	.563			343	1.116	.873	343	4.119
016	.738	.626			344	1.178	.935	344	4.244
017	.800	.688			345	1.241	.998	345	4.369
018	.863	.751			346	1.303	1.060	346	4.494
019	.925	.813			347	1.366	1.123	347	4.619
020	.989	.881			348	1.428	1.185	348	4.744
021	1.055	.943			349	1.491	1.248	349	4.869
022	1.118	1.006				1.553	1.310		4.994
023	1.180	1.068			425	1.616	1.373	425	5.099
024	1.243	1.131			426	1.678	1.435	426	5.224
025	1.305	1.193			427	1.741	1.498	427	5.349
026	1.368	1.256			428	1.803	1.560	428	5.474
027	1.430	1.318			429	1.866	1.622	429	5.599
028	1.493	1.381			430	1.928	1.685	430	5.724
110	.551	.373			431	2.000	1.747	431	5.849
111	.613	.435			432	2.062	1.810	432	5.974
112	.675	.498			433	2.124	1.872	433	6.099
113	.738	.560			434	2.186	1.935	434	6.224
114	.801	.623			435	2.248	1.997	435	6.349
115	.863	.685			436	2.310	2.060	436	6.474
116	.925	.748			437	2.372	2.122	437	6.599
117	.989	.811			438	2.434	2.185	438	6.724
118	1.056	.878			439	2.496	2.247	439	6.849
119	1.118	.940			440	2.558	2.310	440	6.974
120	1.181	1.003			441	2.620	2.372	441	7.099
121	1.243	1.065			442	2.682	2.435	442	7.224
122	1.306	1.128			443	2.744	2.497	443	7.349
123	1.368	1.190			444	2.806	2.560	444	7.474
124	1.431	1.253			445	2.868	2.622	445	7.599
125	1.493	1.315			446	2.930	2.685	446	7.724
126	1.558	1.380			447	2.992	2.747	447	7.849
127	1.620	1.442			448	3.054	2.810	448	7.974
128	1.683	1.505			449	3.116	2.872	449	8.099
129	1.742	1.564			450	3.178	2.935	450	8.224
130	1.805	1.627			451	3.240	2.997	451	8.349
131	1.867	1.689			452	3.302	3.060	452	8.474
132	1.930	1.752			453	3.364	3.122	453	8.599
133	1.992	1.814			454	3.426	3.185	454	8.724
134	2.055	1.877			455	3.488	3.247	455	8.849
135	2.118	1.940			456	3.550	3.310	456	8.974
136	2.180	2.002			457	3.612	3.372	457	9.099
137	2.243	2.065			458	3.674	3.435	458	9.224
138	2.305	2.127			459	3.736	3.497	459	9.349
139	2.368	2.190			460	3.798	3.560	460	9.474
140	2.430	2.252				3.860	3.622		9.599
141	2.493	2.315				3.922	3.685		9.724
142	2.555	2.377				3.984	3.747		9.849
143	2.618	2.440				4.046	3.810		9.974
144	2.680	2.502				4.108	3.872		10.099

Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.149	.005-.015	.004
013-028	.149	.005-.015	.005
110-149	.183	.005-.015	.005
210-247	.225	.010-.025	.006
325-349	.334	.020-.030	.007
425-460	.440	.020-.030	.010

Notes:

- This part is supplied in long wearing Tetralon® for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same as seal dash size.
- Sidewall notches optional.
- This part also supplied with Mini grooves; add "M" after basic part no. for Minigroove configuration.



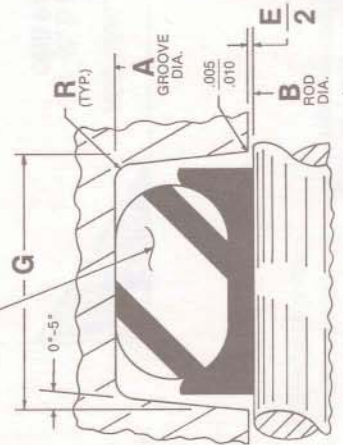
Ordering Instructions

ROD SEAL INSTALLATION
FOR MIL-P-5514
(C, D & E REVISIONS)
ONE BACK-UP GLAND

CODE IDENT.
07128

TF 404

Dash I.o.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 - .000	+ .001 - .001		+ .000 - .002	+ .000 - .002		+ .000 - .000	+ .000 - .002		+ .000 - .000	+ .000 - .002
012	.485	.373	145	2.743	2.565	336	3.245	2.873	336	3.245	2.873
013	.550	.438	146	2.805	2.627	337	3.369	2.997	337	3.369	2.997
014	.613	.501	147	2.868	2.690	338	3.494	3.122	338	3.494	3.122
015	.675	.563	148	2.930	2.752	339	3.619	3.247	339	3.619	3.247
016	.738	.626	149	2.993	2.815	340	3.744	3.372	340	3.744	3.372
017	.800	.688	210	.991	.748	341	3.869	3.497	341	3.869	3.497
018	.863	.751	211	1.053	.810	342	3.994	3.622	342	3.994	3.622
019	.925	.813	212	1.116	.873	343	4.119	3.747	343	4.119	3.747
020	.988	.881	213	1.178	.935	344	4.244	3.872	344	4.244	3.872
021	1.055	.943	214	1.241	.998	345	4.369	3.997	345	4.369	3.997
022	1.118	1.006	215	1.303	1.060	346	4.494	4.122	346	4.494	4.122
023	1.180	1.068	216	1.366	1.123	347	4.619	4.247	347	4.619	4.247
024	1.243	1.131	217	1.428	1.185	348	4.744	4.372	348	4.744	4.372
025	1.305	1.193	218	1.491	1.248	349	4.869	4.497	349	4.869	4.497
026	1.368	1.256	219	1.553	1.310		+ .000			+ .000	
027	1.430	1.318	220	1.616	1.373	425	4.974	4.622	425	4.974	4.622
028	1.493	1.381	221	1.678	1.435	426	5.099	4.747	426	5.099	4.747
110	.551	.435	222	1.741	1.498	427	5.224	4.872	427	5.224	4.872
111	.613	.498	223	1.803	1.560	428	5.349	4.997	428	5.349	4.997
112	.675	.560	224	1.866	1.623	429	5.474	5.122	429	5.474	5.122
113	.738	.623	225	1.928	1.685	430	5.599	5.247	430	5.599	5.247
114	.801	.685	226	1.991	1.748	431	5.724	5.372	431	5.724	5.372
115	.863	.748	227	2.053	1.810	432	5.849	5.497	432	5.849	5.497
116	.925	.810	228	2.116	1.873	433	5.974	5.622	433	5.974	5.622
117	.988	.873	229	2.178	1.935	434	6.099	5.747	434	6.099	5.747
118	1.055	.938	230	2.241	2.000	435	6.224	5.872	435	6.224	5.872
119	1.118	1.000	231	2.303	2.062	436	6.349	5.997	436	6.349	5.997
120	1.181	1.063	232	2.366	2.125	437	6.474	6.122	437	6.474	6.122
121	1.243	1.125	233	2.428	2.187	438	6.600	6.247	438	6.600	6.247
122	1.306	1.188	234	2.491	2.250	439	6.724	6.372	439	6.724	6.372
123	1.368	1.250	235	2.553	2.312	440	6.849	6.497	440	6.849	6.497
124	1.431	1.313	236	2.616	2.375	441	6.974	6.622	441	6.974	6.622
125	1.493	1.375	237	2.678	2.437	442	7.100	6.747	442	7.100	6.747
126	1.558	1.438	238	2.741	2.500	443	7.224	6.872	443	7.224	6.872
127	1.620	1.500	239	2.803	2.562	444	7.349	6.997	444	7.349	6.997
128	1.683	1.563	240	2.866	2.625	445	7.474	7.122	445	7.474	7.122
129	1.742	1.625	241	2.928	2.687	446	7.600	7.247	446	7.600	7.247
130	1.805	1.688	242	2.991	2.750	447	7.724	7.372	447	7.724	7.372
131	1.867	1.750	243	3.053	2.812	448	7.849	7.497	448	7.849	7.497
132	1.930	1.813	244	3.116	2.875	449	7.974	7.622	449	7.974	7.622
133	1.992	1.875	245	3.178	2.937	450	8.100	7.747	450	8.100	7.747
134	2.055	1.938	246	3.241	3.000	451	8.224	7.872	451	8.224	7.872
135	2.118	2.000	247	3.303	3.062	452	8.349	7.997	452	8.349	7.997
136	2.180	2.063	248	3.366	3.125	453	8.474	8.122	453	8.474	8.122
137	2.243	2.125	249	3.428	3.187	454	8.600	8.247	454	8.600	8.247
138	2.305	2.188	250	3.491	3.250	455	8.724	8.372	455	8.724	8.372
139	2.368	2.250	251	3.553	3.312	456	8.849	8.497	456	8.849	8.497
140	2.430	2.313	252	3.616	3.375	457	8.974	8.622	457	8.974	8.622
141	2.493	2.375	253	3.678	3.437	458	9.100	8.747	458	9.100	8.747
142	2.555	2.438	254	3.741	3.500	459	9.224	8.872	459	9.224	8.872
143	2.618	2.500	255	3.803	3.562	460	9.349	8.997	460	9.349	8.997
144	2.680	2.563	256	3.866	3.625						



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.207	.005-.015	.004
013-028	.207	.005-.015	.005
110-149	.245	.005-.015	.005
210-247	.304	.010-.025	.006
325-349	.424	.020-.030	.007
425-460	.579	.020-.030	.010

Notes:

- This part is supplied in long wearing Tetralon[®]; for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same as seal dash size.
- Suitable for use with MIL-P-83461 O-rings in MIL-H-83282 hydraulic fluid as well as with all standard hydraulic fluids and O-ring compounds.
- Sidewall notches optional.
- This part also supplied with Mini grooves; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

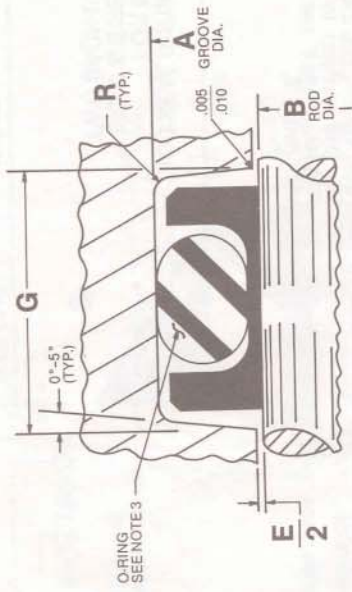


ROD SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) TWO BACK-UP GLAND HEAVY DUTY SERVICE

CODE IDENT.
07128

TF 934

Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
012	+ .001 - .001	+ .000 - .001	145	+ .002 - .000	+ .000 - .002	336	+ .002 - .000	+ .000 - .002
013	.485	.373	146	2.743	2.565	337	3.245	2.873
014	+ .002 - .002	+ .000 - .002	147	2.805	2.627	338	3.369	2.997
015	.550	.438	148	2.868	2.690	339	3.494	3.122
016	.613	.501	149	2.930	2.752	340	3.619	3.247
017	.675	.563	210	2.993	2.815	341	3.744	3.372
018	.738	.626	211	.991	.748	342	3.869	3.497
019	.800	.688	212	1.053	.810	343	3.994	3.622
020	.863	.751	213	1.116	.873	344	4.119	3.747
021	.925	.813	214	1.178	.935	345	4.244	3.872
022	.988	.875	215	1.241	.998	346	4.369	3.997
023	1.051	.938	216	1.303	1.060	347	4.494	4.122
024	1.114	1.006	217	1.366	1.123	348	4.619	4.247
025	1.177	1.068	218	1.428	1.185	349	4.744	4.372
026	1.240	1.131	219	1.491	1.248		4.869	4.497
027	1.303	1.193	220	1.553	1.310		+ .003 - .000	+ .000 - .003
028	1.366	1.256	221	1.616	1.373	425	4.974	4.497
110	1.429	1.318	222	1.678	1.435	426	5.099	4.622
111	1.492	1.381	223	1.741	1.498	427	5.224	4.747
112	1.555	1.444	224	1.803	1.561	428	5.349	4.872
113	1.618	1.507	225	1.866	1.624	429	5.474	4.997
114	1.681	1.570	226	1.929	1.687	430	5.599	5.122
115	1.744	1.633	227	2.000	1.750	431	5.724	5.247
116	1.807	1.696	228	2.063	1.813	432	5.849	5.372
117	1.870	1.759	229	2.126	1.876	433	5.974	5.497
118	1.933	1.822	230	2.189	1.939	434	6.099	5.622
119	1.996	1.885	231	2.252	2.002	435	6.224	5.747
120	2.059	1.948	232	2.315	2.065	436	6.349	5.872
121	2.122	2.011	233	2.378	2.128	437	6.474	5.997
122	2.185	2.074	234	2.441	2.191	438	6.600	6.122
123	2.248	2.137	235	2.504	2.254	439	6.724	6.247
124	2.311	2.200	236	2.567	2.317	440	6.849	6.372
125	2.374	2.263	237	2.630	2.380	441	6.974	6.497
126	2.437	2.326	238	2.693	2.443	442	7.100	6.622
127	2.500	2.389	239	2.756	2.506	443	7.224	6.747
128	2.563	2.452	240	2.819	2.569	444	7.349	6.872
129	2.626	2.515	241	2.882	2.632	445	7.474	6.997
130	2.689	2.578	242	2.945	2.695	446	7.600	7.122
131	2.752	2.641	243	3.008	2.758	447	7.724	7.247
132	2.815	2.704	244	3.071	2.821	448	7.849	7.372
133	2.878	2.767	245	3.134	2.884	449	7.974	7.497
134	2.941	2.830	246	3.197	2.947	450	8.100	7.622
135	3.004	2.893	247	3.260	2.999	451	8.224	7.747
136	3.067	2.956	325	3.323	3.062	452	8.349	7.872
137	3.130	3.019	326	3.386	3.125	453	8.474	7.997
138	3.193	3.082	327	3.449	3.188	454	8.600	8.122
139	3.256	3.145	328	3.512	3.251	455	8.724	8.247
140	3.319	3.208	329	3.575	3.314	456	8.849	8.372
141	3.382	3.271	330	3.638	3.377	457	8.974	8.497
142	3.445	3.334	331	3.701	3.440	458	9.100	8.622
143	3.508	3.397	332	3.764	3.503	459	9.224	8.747
144	3.571	3.460	333	3.827	3.566	460	9.349	8.872
	3.634	3.523	334	3.890	3.629		9.474	8.997
	3.697	3.586	335	3.953	3.692		9.600	9.122
	3.760	3.649		4.016	3.755		9.724	9.247
	3.823	3.712		4.079	3.818		9.849	9.372
	3.886	3.775		4.142	3.881		9.974	9.497
	3.949	3.838		4.205	3.944		10.100	9.622
	4.012	3.901		4.268	4.007		10.224	9.747
	4.075	3.964		4.331	4.070		10.349	9.872
	4.138	4.027		4.394	4.133		10.474	9.997
	4.201	4.090		4.457	4.196		10.600	10.122
	4.264	4.153		4.520	4.259		10.724	10.247
	4.327	4.216		4.583	4.322		10.849	10.372
	4.390	4.279		4.646	4.385		10.974	10.497
	4.453	4.342		4.709	4.448		11.100	10.622
	4.516	4.405		4.772	4.511		11.224	10.747
	4.579	4.468		4.835	4.574		11.349	10.872
	4.642	4.531		4.898	4.637		11.474	10.997
	4.705	4.594		4.961	4.700		11.600	11.122
	4.768	4.657		5.024	4.763		11.724	11.247
	4.831	4.720		5.087	4.826		11.849	11.372
	4.894	4.783		5.150	4.889		11.974	11.497
	4.957	4.846		5.213	4.952		12.100	11.622
	5.020	4.909		5.276	5.015		12.224	11.747
	5.083	4.972		5.339	5.078		12.349	11.872
	5.146	5.035		5.402	5.141		12.474	11.997
	5.209	5.098		5.465	5.204		12.600	12.122
	5.272	5.161		5.528	5.267		12.724	12.247
	5.335	5.224		5.591	5.330		12.849	12.372
	5.398	5.287		5.654	5.393		12.974	12.497
	5.461	5.350		5.717	5.456		13.100	12.622
	5.524	5.413		5.780	5.519		13.224	12.747
	5.587	5.476		5.843	5.582		13.349	12.872
	5.650	5.539		5.906	5.645		13.474	12.997
	5.713	5.602		5.969	5.708		13.600	13.122
	5.776	5.665		6.032	5.771		13.724	13.247
	5.839	5.728		6.095	5.834		13.849	13.372
	5.902	5.791		6.158	5.897		13.974	13.497
	5.965	5.854		6.221	5.960		14.100	13.622
	6.028	5.917		6.284	6.023		14.224	13.747
	6.091	5.980		6.347	6.086		14.349	13.872
	6.154	6.043		6.410	6.149		14.474	13.997
	6.217	6.106		6.473	6.212		14.600	14.122
	6.280	6.169		6.536	6.275		14.724	14.247
	6.343	6.232		6.599	6.338		14.849	14.372
	6.406	6.295		6.662	6.401		14.974	14.497
	6.469	6.358		6.725	6.464		15.100	14.622
	6.532	6.421		6.788	6.527		15.224	14.747
	6.595	6.484		6.851	6.590		15.349	14.872
	6.658	6.547		6.914	6.653		15.474	14.997
	6.721	6.610		6.977	6.716		15.600	15.122
	6.784	6.673		7.040	6.779		15.724	15.247
	6.847	6.736		7.103	6.842		15.849	15.372
	6.910	6.799		7.166	6.905		15.974	15.497
	6.973	6.862		7.229	6.968			
	7.036	6.925		7.292	7.031			
	7.099	6.988		7.355	7.094			
	7.162	7.051		7.418	7.157			
	7.225	7.114		7.481	7.220			
	7.288	7.177		7.544	7.283			
	7.351	7.240		7.607	7.346			
	7.414	7.303		7.670	7.409			
	7.477	7.366		7.733	7.472			
	7.540	7.429		7.796	7.535			
	7.603	7.492		7.859	7.598			
	7.666	7.555		7.922	7.661			
	7.729	7.618		7.985	7.724			
	7.792	7.681		8.048	7.787			
	7.855	7.744		8.111	7.850			
	7.918	7.807		8.174	7.913			
	7.981	7.870		8.237	7.976			
	8.044	7.933		8.300	8.039			
	8.107	7.996		8.363	8.102			
	8.170	8.059		8.426	8.165			
	8.233	8.122		8.489	8.228			
	8.296	8.185		8.552	8.291			
	8.359	8.248		8.615	8.354			
	8.422	8.311		8.678	8.417			
	8.485	8.374		8.741	8.480			
	8.548	8.437		8.804	8.543			
	8.611	8.500		8.867	8.606			
	8.674	8.563		8.930	8.669			
	8.737	8.626		8.993	8.732			
	8.800	8.689		9.056	8.795			
	8.863							



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
014-028	.207	.005-.015	.005
110-127	.245	.005-.015	.005
210-247	.304	.010-.025	.006
325-349	.424	.020-.030	.007
425-460	.579	.020-.030	.010

Notes:

1. This part is supplied in virgin TFE. For other material callouts, refer to Technical Data section.
2. Dash nos. correspond to those of AS 568.
3. O-ring supplied on request. Size is same as seal size.
4. Parts supplied with sidewall notches.
5. This part also supplied with Minigrooves®, add "M" after basic part no. for Minigroove configuration.
6. Dash nos. 110 thru 116, 210 thru 222 and 325 thru 349 conform to Boeing SCD BACR12BJ.

Ordering Instructions

Ordering Instructions for Boeing Part Number BACR12BJ (See Note 6)
Example: BACR12BJ-214-AorB

Basic P/N _____
Size Dash No. _____
Material Code _____
A-BMS8-121 Typ. 1, GR. B, CL. 1
B-MIL-R-8791



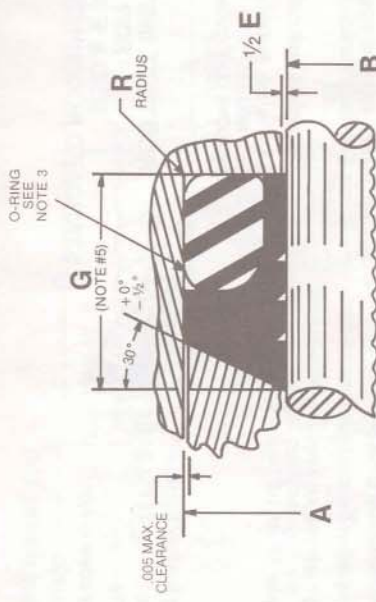
ROD SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) TWO BACK-UP GLAND

TETRAFLUOR INC., 2051 EAST MAPLE AVENUE, EL SEGUNDO, CALIFORNIA 90245

TF 451

CODE IDENT. **07128**

Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .002	- .000		+ .000	- .002		+ .002	- .000		+ .000	- .002
014	.613	.501	222	1.741	1.498	344	4.244	3.872	4.244	3.872	3.872
015	.675	.563	223	1.868	1.625	345	4.369	3.997	4.369	3.997	3.997
016	.738	.626	224	1.993	1.750	346	4.494	4.122	4.494	4.122	4.122
017	.800	.688	225	2.118	1.875	347	4.619	4.247	4.619	4.247	4.247
018	.863	.751	226	2.243	2.000	348	4.744	4.372	4.744	4.372	4.372
019	.925	.813	227	2.368	2.125	349	4.869	4.497	4.869	4.497	4.497
020	.993	.881	228	2.493	2.250		+ .003	+ .000	+ .003	+ .000	+ .000
021	1.055	.943	229	2.618	2.375		- .000	- .003	- .000	- .003	- .003
022	1.118	1.006	230	2.743	2.500	425	4.974	4.497	4.974	4.497	4.497
023	1.180	1.068	231	2.868	2.625	426	5.099	4.622	5.099	4.622	4.622
024	1.243	1.131	232	2.993	2.750	427	5.224	4.747	5.224	4.747	4.747
025	1.305	1.193	233	3.118	2.875	428	5.349	4.872	5.349	4.872	4.872
026	1.368	1.256	234	3.243	3.000	429	5.474	4.997	5.474	4.997	4.997
027	1.430	1.318	235	3.368	3.125	430	5.599	5.122	5.599	5.122	5.122
028	1.493	1.381	236	3.493	3.250	431	5.724	5.247	5.724	5.247	5.247
110	.551	.373	237	3.618	3.375	432	5.849	5.372	5.849	5.372	5.372
111	.613	.435	238	3.743	3.500	433	5.974	5.497	5.974	5.497	5.497
112	.676	.498	239	3.868	3.625	434	6.099	5.622	6.099	5.622	5.622
113	.738	.560	240	3.993	3.750	435	6.224	5.747	6.224	5.747	5.747
114	.801	.623	241	4.118	3.875	436	6.349	5.872	6.349	5.872	5.872
115	.863	.685	242	4.243	4.000	437	6.474	5.997	6.474	5.997	5.997
116	.926	.748	243	4.368	4.125	438	6.624	6.247	6.624	6.247	6.247
117	.993	.815	244	4.493	4.250	439	6.974	6.497	6.974	6.497	6.497
118	1.056	.878	245	4.618	4.375	440	7.224	6.747	7.224	6.747	6.747
119	1.118	.940	246	4.743	4.500	441	7.474	6.997	7.474	6.997	6.997
120	1.181	1.003	247	4.868	4.625	442	7.724	7.247	7.724	7.247	7.247
121	1.243	1.065	325	1.870	1.498	443	7.974	7.497	7.974	7.497	7.497
122	1.306	1.128	326	1.995	1.623	444	8.224	7.747	8.224	7.747	7.747
123	1.368	1.190	327	2.120	1.748	445	8.474	7.997	8.474	7.997	7.997
124	1.431	1.253	328	2.245	1.873	446	8.974	8.497	8.974	8.497	8.497
125	1.493	1.315	329	2.370	1.998	447	9.474	8.997	9.474	8.997	8.997
126	1.556	1.380	330	2.495	2.123	448	9.974	9.497	9.974	9.497	9.497
127	1.620	1.442	331	2.620	2.248	449	10.474	9.997	10.474	9.997	9.997
210	.991	.748	332	2.745	2.373	450	10.974	10.497	10.974	10.497	10.497
211	1.053	.810	333	2.870	2.498	451	11.474	10.997	11.474	10.997	10.997
212	1.116	.873	334	2.995	2.623	452	11.974	11.497	11.974	11.497	11.497
213	1.178	.935	335	3.120	2.748	453	12.474	11.997	12.474	11.997	11.997
214	1.241	.998	336	3.245	2.873	454	12.974	12.497	12.974	12.497	12.497
215	1.303	1.060	337	3.369	2.997	455	13.474	12.997	13.474	12.997	12.997
216	1.366	1.123	338	3.494	3.122	456	13.974	13.497	13.974	13.497	13.497
217	1.428	1.185	339	3.619	3.247	457	14.474	13.997	14.474	13.997	13.997
218	1.491	1.248	340	3.744	3.372	458	14.974	14.497	14.974	14.497	14.497
219	1.553	1.310	341	3.869	3.497	459	15.474	14.997	15.474	14.997	14.997
220	1.616	1.373	342	3.994	3.622	460	15.974	15.497	15.974	15.497	15.497
221	1.678	1.435	343	4.119	3.747						



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+	-		+	-		+	-		+	-
006	.000	-.001	.001	-.000	.000	-.000	1.20	1.748	431	.000	-.003
007	.235	.123	.154	.185	1.748	1.998	2.244	1.873	432	5.724	5.247
008	.297	.185	.217	.248	1.998	2.370	2.370	1.998	433	5.849	5.372
009	.329	.217	.248	.300	2.123	2.495	2.495	2.123	434	6.099	5.622
010	.360	.248	.300	.373	2.248	2.620	2.620	2.248	435	6.224	5.747
011	.422	.300	.373	.485	2.373	2.745	2.745	2.373	436	6.349	5.872
012	.485	.373	.485	.560	2.498	2.870	2.870	2.498	437	6.474	5.997
					2.623	2.995	2.995	2.623	438	6.724	6.247
110	.000	-.002	.002	-.000	3.120	2.748	3.120	2.748	439	6.974	6.497
111	.551	.378	.435	.498	3.245	2.873	3.245	2.873	440	7.224	6.747
112	.613	.435	.498	.560	3.369	2.997	3.369	2.997	441	7.474	6.997
113	.676	.498	.560	.623	3.494	3.122	3.494	3.122	442	7.724	7.247
	.738	.560	.623	.685	3.619	3.247	3.619	3.247	443	7.974	7.497
114	.801	.623	.685	.748	3.744	3.372	3.744	3.372	444	8.224	7.747
115	.863	.685	.748	.810	3.869	3.497	3.869	3.497	445	8.474	7.997
116	.926	.748	.810	.873	3.994	3.622	3.994	3.622	446	8.974	8.497
					4.119	3.737	4.119	3.737	447	9.474	8.997
210	.991	.748	.810	.873	4.244	3.872	4.244	3.872	448	9.974	9.497
211	1.053	.810	.873	.935	4.369	3.997	4.369	3.997	449	10.474	9.997
212	1.116	.873	.935	.998	4.494	4.122	4.494	4.122	450	10.974	10.497
213	1.178	.935	.998	1.060	4.619	4.247	4.619	4.247	451	11.474	10.997
214	1.241	.998	1.060	1.123	4.744	4.372	4.744	4.372	452	11.974	11.497
215	1.303	1.060	1.123	1.185	4.869	4.497	4.869	4.497	453	12.474	11.997
216	1.366	1.123	1.185	1.248							
217	1.428	1.185	1.248	1.310	4.994	4.622	4.994	4.622	454	12.974	12.497
218	1.491	1.248	1.310	1.373	5.119	4.747	5.119	4.747	455	13.474	12.997
219	1.553	1.310	1.373	1.435	5.244	4.872	5.244	4.872	456	13.974	13.497
220	1.616	1.373	1.435	1.498	5.369	4.997	5.369	4.997	457	14.474	13.997
221	1.678	1.435	1.498	1.560	5.494	5.122	5.494	5.122	458	14.974	14.497
222	1.741	1.498	1.560	1.623	5.619	5.247	5.619	5.247	459	15.474	14.997
325	1.870	1.498	1.560	1.623	5.744	5.372	5.744	5.372	460	15.974	15.497
326	1.995	1.623	1.623		5.869	5.497	5.869	5.497			

Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
006-012	.207	.005-.015	.004
110-116	.245	.005-.015	.005
210-222	.304	.010-.025	.006
325-349	.424	.020-.030	.007
425-460	.579	.020-.030	.010

Notes:

- This part is supplied in virgin TFE. For 4. The TF455 rod seal is approved by Boeing Airplane Co. Under SCD BACS11AA see instructions for ordering Boeing Part No.
- Dash numbers correspond to AS 568.
- O-ring supplied on request. Size is same as seal dash size.
- Groove width "G" per MIL-P-5514 rev. C, D, & E modified as shown.

Ordering Instructions

Ordering Instructions for Boeing Part Number BACS11AA

Example: BACS11AA-214-A
 Basic P/N
 Size Dash No.
 VTFE per BMS-8-121
 TYP 1, GR. A., CL 1



ROD SEAL INSTALLATION (FOOT SEAL) FOR MIL-P-5514 (C, D & E REVISIONS) MODIFIED TWO BACK-UP GLAND

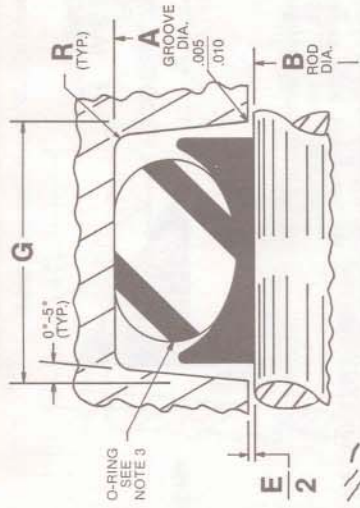
TETRAFLUOR INC., 20511 EAST MAPLE AVENUE, EL SEGUNDO, CALIFORNIA 90245

CODE IDENT.

07128

TF 455

Dash No.	A Dia.		B Dia.		Dash No.	A Dia.		B Dia.	
	+ .000 - .001	+ .001 - .001	+ .000 - .001	+ .001 - .001		+ .000 - .001	+ .001 - .001	+ .000 - .001	+ .001 - .001
AS568 SERIES					AS568 SERIES				
1	.006	.236	.123	.328	31	3.246	2.246	1.872	5.496
2	.007	.267	.154	329	3.371	2.371	1.997	5.621	
3	.008	.298	.185	330	3.496	2.496	2.122	5.746	
AS6227 SERIES					AS6227 SERIES				
4	.009	.330	.217	331	3.621	2.621	2.247	5.871	
5	.010	.361	.248	332	3.746	2.746	2.372	5.996	
6	.011	.423	.310	333	3.871	2.871	2.497	6.246	
7	.012	.486	.373	334	3.996	2.996	2.622	6.496	
8	.110	.552	.373	335	4.121	3.121	2.747	6.746	
9	.111	.614	.435	336	4.246	3.246	2.872	6.996	
10	.112	.677	.498	337	4.371	3.371	2.997	7.246	
11	.113	.739	.560	338	4.496	3.496	3.121	7.496	
12	.114	.802	.623	339	4.621	3.621	3.246	7.746	
13	.115	.864	.685	340	4.746	3.746	3.371	7.996	
14	.116	.927	.748	341	4.871	3.871	3.496	8.246	
15	.210	.992	.747	342	5.000	3.995	3.621	8.496	
16	.211	1.054	.809	343	5.125	4.120	3.746	8.746	
17	.212	1.117	.872	344	5.250	4.245	3.871	8.996	
18	.213	1.179	.934	345	5.375	4.370	3.996	9.246	
19	.214	1.242	.997	346	5.500	4.495	4.121	9.496	
20	.215	1.304	1.059	347	5.625	4.620	4.246	9.746	
21	.216	1.367	1.122	348	5.750	4.745	4.371	9.996	
22	.217	1.429	1.184	349	5.875	4.870	4.496	10.246	
23	.218	1.492	1.247	350	6.000	5.000	4.621	10.496	
24	.219	1.554	1.309	351	6.125	5.125	4.746	10.746	
25	.220	1.617	1.372	352	6.250	5.250	4.871	10.996	
26	.221	1.679	1.434	353	6.375	5.375	4.996	11.246	
27	.222	1.742	1.497	354	6.500	5.500	5.121	11.496	
325		1.871	1.497	355	6.625	5.625	5.246	11.746	
29	.326	1.996	1.622	356	6.750	5.750	5.371	11.996	
30	.327	2.121	1.747	357	6.875	5.875	5.496	12.246	



Dash No.	G Groove Width + .005 - .000	R Groove Radius Max.	E Diametral Clearance Max.
006-012	.138	.005-.015	.005
110-116	.171	.005-.015	.005
210-222	.208	.010-.025	.006
325-349	.311	.020-.035	.007
425-429	.408	.020-.035	.008
430-460	.408	.020-.035	.010

Notes:

- This part is supplied in long wearing "Tetralon"; for other material callouts refer to Technical Data section.
- Dash nos. correspond to dash nos. of AS 568. Dash nos. of "AN" series O-rings are shown for cross reference only.
-
- Sidewall notches optional.
- This part also supplied with Mini-grooves; add "M" after basic part no. for Minigroove configuration.

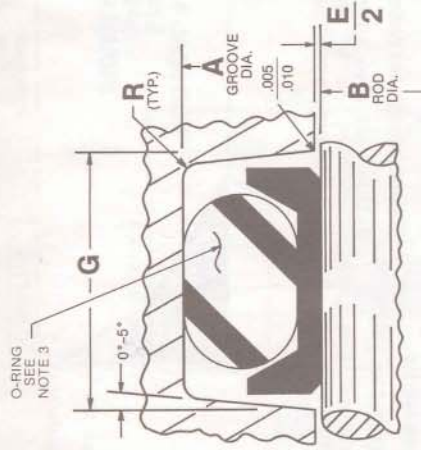
Ordering Instructions



ROD SEAL INSTALLATION FOR MIL-P-5514 (A & B REVISIONS) ONE BACK-UP GLAND

CODE IDENT.
07128

TF 388



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001	- .001		+ .000	- .002		+ .002	- .002		+ .000	- .003
005	.256	.125	127	1.633	1.437	231	2.888	2.625	425	5.014	4.500
007	.287	.156	128	1.696	1.500	232	3.013	2.750	426	5.139	4.625
008	.318	.187	129	1.758	1.562	233	3.138	2.875	427	5.264	4.750
009	.349	.219	130	1.821	1.625	234	3.263	3.000	428	5.389	4.875
010	.381	.250	131	1.883	1.687	235	3.388	3.125	429	5.514	5.000
011	.443	.312	132	1.946	1.750	236	3.513	3.250	430	5.639	5.125
012	.506	.375	133	2.008	1.812	237	3.638	3.375	431	5.764	5.250
			134	2.071	1.875	238	3.763	3.500	432	5.889	5.375
			135	2.133	1.937	239	3.888	3.625	433	6.014	5.500
013	.568	.437	136	2.196	2.000	240	4.013	3.750	434	6.139	5.625
014	.631	.500	137	2.258	2.062	241	4.138	3.875	435	6.264	5.750
015	.693	.562	138	2.321	2.125	242	4.263	4.000	436	6.389	5.875
016	.756	.625	139	2.383	2.187	243	4.388	4.125	437	6.514	6.000
017	.818	.687	140	2.446	2.250	244	4.513	4.250	438	6.639	6.125
018	.881	.749	141	2.508	2.312	245	4.638	4.375	439	6.764	6.250
019	.943	.812	142	2.571	2.375	246	4.763	4.500	440	6.889	6.375
020	1.006	.875	143	2.633	2.437	247	4.888	4.625	441	7.014	6.500
021	1.068	.937	144	2.696	2.500	248	5.013	4.750	442	7.139	6.625
022	1.131	1.000	145	2.758	2.562	249	5.138	4.875	443	7.264	6.750
023	1.193	1.062	146	2.821	2.625	250	5.263	5.000	444	7.389	6.875
024	1.256	1.125	147	2.883	2.687	251	5.388	5.125	445	7.514	7.000
025	1.318	1.187	148	2.946	2.750	252	5.513	5.250	446	7.639	7.125
026	1.381	1.250	149	3.008	2.812	253	5.638	5.375	447	7.764	7.250
027	1.443	1.312	150	3.071	2.875	254	5.763	5.500	448	7.889	7.375
028	1.506	1.375	151	3.136	3.000	255	5.888	5.625	449	8.014	7.500
029	1.568	1.500	152	3.200	3.125	256	6.013	5.750	450	8.139	7.625
030	1.631	1.625	153	3.263	3.250	257	6.138	5.875	451	8.264	7.750
031	1.693	1.750	154	3.326	3.375	258	6.263	6.000	452	8.389	7.875
032	1.756	1.875	155	3.389	3.500	259	6.388	6.125	453	8.514	8.000
033	1.818	2.000	156	3.452	3.625	260	6.513	6.250	454	8.639	8.125
034	1.881	2.125	157	3.515	3.750	261	6.638	6.375	455	8.764	8.250
035	1.943	2.250	158	3.578	3.875	262	6.763	6.500	456	8.889	8.375
036	2.006	2.375	159	3.641	4.000	263	6.888	6.625	457	9.014	8.500
037	2.068	2.500	160	3.704	4.125	264	7.013	6.750	458	9.139	8.625
038	2.131	2.625	161	3.767	4.250	265	7.138	6.875	459	9.264	8.750
039	2.193	2.750	162	3.830	4.375	266	7.263	7.000	460	9.389	8.875
040	2.256	2.875	163	3.893	4.500	267	7.388	7.125			
041	2.318	3.000	210	3.956	4.625	268	7.513	7.250			
042	2.381	3.125	211	4.019	4.750	269	7.638	7.375			
043	2.443	3.250	212	4.082	4.875	270	7.763	7.500			
044	2.506	3.375	213	4.145	5.000	271	7.888	7.625			
110	.562	.437	214	4.208	5.125	272	8.013	7.750			
111	.625	.500	215	4.271	5.250	273	8.138	7.875			
112	.688	.562	216	4.334	5.375	274	8.263	8.000			
113	.750	.625	217	4.397	5.500	275	8.388	8.125			
114	.812	.687	218	4.460	5.625	276	8.513	8.250			
115	.875	.750	219	4.523	5.750	277	8.638	8.375			
116	.937	.812	220	4.586	5.875	278	8.763	8.500			
117	1.000	.875	221	4.649	6.000	279	8.888	8.625			
118	1.062	.937	222	4.712	6.125	280	9.013	8.750			
119	1.125	1.000	223	4.775	6.250	281	9.138	8.875			
120	1.187	1.062	224	4.838	6.375	282	9.263	9.000			
121	1.250	1.125	225	4.901	6.500	325	9.388	9.125			
122	1.312	1.187	226	4.964	6.625	326	9.513	9.250			
123	1.375	1.250	227	5.027	6.750	327	9.638	9.375			
124	1.437	1.312	228	5.090	6.875	328	9.763	9.500			
125	1.500	1.375	229	5.153	7.000	329	9.888	9.625			
126	1.562	1.437	230	5.216	7.125		10.013	9.750			

Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
006-044	.094	.005-.015	.004
110-163	.141	.005-.015	.005
210-281	.188	.010-.020	.006
325-349	.281	.020-.030	.007
425-460	.375	.020-.030	.008

- Notes**
- This part is supplied in molybdenum disulfide filled TFE. For other material callouts, refer to Technical Data section.
 - Dash numbers correspond to AS 568.
 - O-ring size is same as seal size.
 - Rod diameters are in accordance with standard industrial practice.
 - This part also supplied with Minigrooves®, add "M" after basic part no. for Minigroove configuration.
 - Sidewall notches optional.

Ordering Instructions

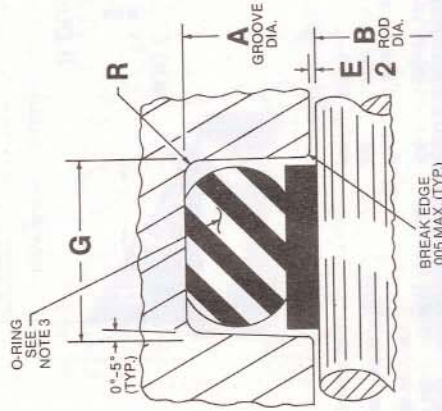
Tetrafluor

ROD SEAL INSTALLATION FOR STANDARD ROD SPECIAL GROOVE NO BACK-UP GLAND INDUSTRIAL SERVICE

TETRAFLUOR INC., 2051 EAST MAPLE AVENUE, EL SEGUNDO, CALIFORNIA 90245

CODE IDENT:
07128

TF 732



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .002 - .000	+ .000 - .002		+ .003 - .000	+ .000 - .003		+ .005 - .000	+ .000 - .006			
006	.268	.156	140	2.487	2.250	330	2.616	2.125			
007	.299	.155	141	2.549	2.312	331	2.741	2.250			
008	.331	.188	142	2.612	2.375	332	2.866	2.375			
009	.362	.219	143	2.674	2.437	333	2.991	2.500			
010	.424	.250	144	2.737	2.500	334	3.116	2.625			
011	.487	.312	145	2.799	2.562	335	3.241	2.750			
012	.550	.375	146	2.862	2.625	336	3.366	2.875			
			147	2.924	2.687	337	3.491	3.000			
			148	2.987	2.750	338	3.616	3.125			
013	.610	.437		3.050	2.812	339	3.741	3.250			
014	.672	.500		3.113	.750	340	3.866	3.375			
015	.735	.562	210	1.050	.812	341	3.991	3.500			
016	.797	.625	211	1.113	.875	342	4.116	3.625			
017	.860	.687	212	1.175	.937	343	4.241	3.750			
018	.922	.750	213	1.238	1.000	344	4.366	3.875			
019	.985	.812	214	1.300	1.062	345	4.491	4.000			
020	1.047	.875	215	1.363	1.125	346	4.616	4.125			
021	1.110	.937	216	1.425	1.187	347	4.741	4.250			
022	1.172	1.000	217	1.488	1.250	348	4.866	4.375			
023	1.235	1.062	218	1.550	1.312		+ .006 - .000	+ .006 - .006			
024	1.297	1.125	219	1.613	1.375	425	5.093	4.500			
025	1.360	1.187	220	1.675	1.437	426	5.218	4.625			
026	1.422	1.250	221	1.738	1.500		5.343	4.750			
027	1.485	1.312	222	1.800	1.562	427	5.468	4.875			
			223	1.863	1.625	428	5.593	5.000			
			224	1.925	1.687	429	5.718	5.125			
110	.611	.437	225	2.000	1.750	430	5.843	5.250			
111	.674	.500	226	2.063	1.812	431	5.968	5.375			
112	.736	.562	227	2.125	1.875	432	6.093	5.500			
113	.799	.625	228	2.188	1.937	433	6.218	5.625			
114	.861	.687	229	2.250	2.000	434	6.343	5.750			
115	.924	.750	230	2.313	2.062	435	6.468	5.875			
116	.986	.812	231	2.375	2.125	436	6.593	6.000			
117	1.049	.875	232	2.438	2.187	437	6.718	6.125			
118	1.111	.937	233	2.500	2.250	438	6.843	6.250			
119	1.174	1.000	234	2.563	2.312	439	6.968	6.375			
120	1.236	1.062	235	2.625	2.375	440	7.093	6.500			
121	1.299	1.125	236	2.688	2.437	441	7.218	6.625			
122	1.361	1.187	237	2.750	2.500	442	7.343	6.750			
123	1.424	1.250	238	2.813	2.562	443	7.468	6.875			
124	1.486	1.312	239	2.875	2.625	444	7.593	7.000			
125	1.549	1.375	240	2.938	2.687	445	7.718	7.125			
126	1.611	1.437	241	3.000	2.750	446	7.843	7.250			
127	1.674	1.500	242	3.063	2.812		7.968	7.375			
128	1.736	1.562	243	3.125	2.875	448	8.093	7.500			
129	1.799	1.625	244	3.188	2.937	449	8.218	7.625			
130	1.861	1.687	245	3.250	3.000	450	8.343	7.750			
131	1.924	1.750	246	3.313	3.062	451	8.468	7.875			
132	1.986	1.812	247	3.375	3.125	452	8.593	8.000			
133	2.049	1.875		3.438	3.187	453	8.718	8.125			
134	2.112	1.937	325	3.500	3.250	454	8.843	8.250			
135	2.174	2.000	326	3.563	3.312	455	8.968	8.375			
136	2.237	2.062	327	3.625	3.375	456	9.093	8.500			
137	2.299	2.125	328	3.688	3.437	457	9.218	8.625			
138	2.362	2.187	329	3.750	3.500	458	9.343	8.750			
139	2.424	2.250		3.813	3.562	459	9.468	8.875			

Dash No.	G Groove Width + .005 - .000	R Groove Radius	E Diametral Clearance Max.
006-027	.079	.005-.015	.004
110-148	.112	.005-.015	.005
210-247	.149	.010-.025	.006
325-348	.221	.020-.035	.007
425-459	.297	.020-.035	.008

- Notes:**
- This part is supplied in long wearing Tetralon®. For other material callouts, refer to Technical Data section.
 - Dash nos. correspond to those of AS568.
 - O-ring supplied on request. Size is one Dash no. higher than seal size. For example, TF-481-214 uses 215 O-ring.
 - Rod diameter "B" per recommended industrial practice.
 - Sidewall notches optional.
 - This part also supplied with Mini-grooves; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

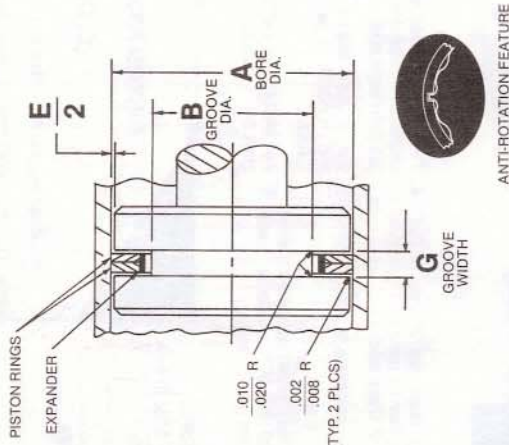


**ROD SEAL INSTALLATION
STANDARD ROD
SPECIAL GLAND
INDUSTRIAL SERVICE**

CODE IDENT.
07128

TF 481

Dash No.	A B G			Dash No.	A B G			Dash No.	A B G		
	+ .002 - .000	+ .004 - .004	+ .001 - .001		+ .002 - .000	+ .004 - .004	+ .001 - .001		+ .003 - .000	+ .004 - .004	+ .001 - .001
112	.675	.429	.126	331	2.618	2.184	.126	425	4.974	4.414	.189
113	.738	.428	.126	332	2.743	2.309	.126	426	5.099	4.539	.189
114	.800	.490	.126	333	2.868	2.434	.126	427	5.224	4.664	.189
115	.863	.553	.126								
116	.925	.615	.126	334	2.993	2.559	.126	428	5.349	4.789	.189
210	.991	.681	.126	335	3.118	2.684	.126	429	5.474	4.914	.189
211	1.053	.743	.126	336	3.243	2.809	.126	430	5.599	5.039	.189
212	1.116	.806	.126	337	3.368	2.934	.126	431	5.724	5.164	.189
213	1.178	.868	.126	338	3.493	3.059	.126	432	5.849	5.289	.189
214	1.241	.931	.126	339	3.618	3.184	.126	433	5.974	5.414	.189
215	1.303	.993	.126	340	3.743	3.309	.126	434	6.099	5.539	.189
216	1.366	1.056	.126	341	3.868	3.434	.126	435	6.224	5.664	.189
217	1.428	.994	.126	342	3.993	3.559	.126	436	6.349	5.789	.189
218	1.491	1.057	.126	343	4.118	3.558	.126	437	6.474	5.914	.189
219	1.553	1.119	.126	344	4.243	3.683	.126	438	6.724	6.164	.189
220	1.616	1.182	.126	345	4.368	3.808	.126	439	6.974	6.414	.189
221	1.678	1.244	.126	346	4.493	3.933	.126	440	7.224	6.664	.189
222	1.741	1.307	.126	347	4.618	4.058	.126	441	7.474	6.914	.189
325	1.867	1.433	.126	348	4.743	4.183	.126	442	7.724	7.164	.189
326	1.992	1.558	.126	349	4.868	4.308	.126	443	7.974	7.414	.189
327	2.118	1.684	.126					444	8.224	7.664	.189
328	2.243	1.809	.126					445	8.474	7.914	.189
329	2.368	1.934	.126					446	8.974	8.414	.189
330	2.493	2.059	.126					447	9.474	8.914	.189



Dash No.	E Diametral Clearance Max.
112-334	.005
335-342	.006
343-349	.007
425 & UP	.008

Notes:

- This part is supplied in long wearing Tetralon®. For other material callouts, refer to Technical Data section.
- Bore dimensions conform to MIL-G-5514F.
- Dash nos. of this drawing correspond to Dash nos. of AS-568 uniform dash numbering system for O-rings.
- The TF 1055 series piston ring is furnished in sets consisting of two TF 1056 piston rings and one TF 1057 expander.
- Expander Mat'l: Steel, 12-9-2 maraging stainless.

Ordering Information

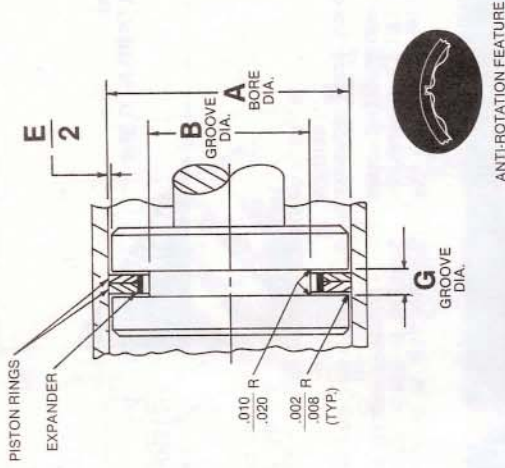
Example: TF 1055-214
 Piston Ring Set No. _____
 Size Dash No. _____



PISTON RING INSTALLATION FOR MIL-G-5514 (F REVISION)

CODE IDENT.
07128

TF 1055



ANTI-ROTATION FEATURE

Dash No.	A		B		G		Dash No.	A		B		G			
	+ .002 - .000	+ .004 - .004	.430 .126	.426 .126	.491 .126	.486 .126		+ .002 - .000	+ .004 - .004	.2620 2.186	.2745 2.311	.2870 2.436	.2620 2.186	.2745 2.311	.2870 2.436
112	.676	.430	.126	.126	.491	.126	331	2.620	2.186	2.870	2.436	2.620	2.186	2.870	2.436
113	.738	.426	.126	.126	.491	.126	332	2.745	2.311	2.870	2.436	2.745	2.311	2.870	2.436
114	.801	.491	.126	.126	.491	.126	333	2.870	2.436	2.870	2.436	2.870	2.436	2.870	2.436
115	.863	.553	.126	.126	.491	.126	334	2.995	2.561	2.870	2.436	2.995	2.561	2.870	2.436
116	.926	.616	.126	.126	.491	.126	335	3.120	2.686	2.870	2.436	3.120	2.686	2.870	2.436
210	.991	.681	.126	.126	.491	.126	336	3.245	2.811	2.870	2.436	3.245	2.811	2.870	2.436
211	1.053	.743	.126	.126	.491	.126	337	3.369	2.935	2.870	2.436	3.369	2.935	2.870	2.436
212	1.116	.806	.126	.126	.491	.126	338	3.494	3.060	2.870	2.436	3.494	3.060	2.870	2.436
213	1.178	.868	.126	.126	.491	.126	339	3.619	3.185	2.870	2.436	3.619	3.185	2.870	2.436
214	1.241	.931	.126	.126	.491	.126	340	3.744	3.310	2.870	2.436	3.744	3.310	2.870	2.436
215	1.303	.993	.126	.126	.491	.126	341	3.869	3.435	2.870	2.436	3.869	3.435	2.870	2.436
216	1.366	1.056	.126	.126	.491	.126	342	3.994	3.560	2.870	2.436	3.994	3.560	2.870	2.436
217	1.428	.994	.126	.126	.491	.126	343	4.119	3.559	2.870	2.436	4.119	3.559	2.870	2.436
218	1.491	1.057	.126	.126	.491	.126	344	4.244	3.684	2.870	2.436	4.244	3.684	2.870	2.436
219	1.553	1.119	.126	.126	.491	.126	345	4.369	3.809	2.870	2.436	4.369	3.809	2.870	2.436
220	1.616	1.182	.126	.126	.491	.126	346	4.494	3.934	2.870	2.436	4.494	3.934	2.870	2.436
221	1.678	1.244	.126	.126	.491	.126	347	4.619	4.059	2.870	2.436	4.619	4.059	2.870	2.436
222	1.741	1.307	.126	.126	.491	.126	348	4.744	4.184	2.870	2.436	4.744	4.184	2.870	2.436
325	1.870	1.436	.126	.126	.491	.126	349	4.869	4.309	2.870	2.436	4.869	4.309	2.870	2.436
326	1.995	1.561	.126	.126	.491	.126									
327	2.120	1.686	.126	.126	.491	.126									
328	2.245	1.811	.126	.126	.491	.126									
329	2.370	1.936	.126	.126	.491	.126									
330	2.495	2.061	.126	.126	.491	.126									

Dash No.	E Diametral Clearance Max.
112-334	.005
335-342	.006
343-349	.007
425 & UP	.008

Notes:

- Piston rings are supplied in virgin TFE 4. The TF 516 series piston ring is furnished in sets consisting of two TF 566 per MIL-R-8791. For other mat'l callouts refer to Technical Data section.
- Bore dimensions conform to MIL-P-5514 5. Expander Mat'l: Type 301 S.S. per MIL-S-5059; Alternate Material: 17-7PH CRES.
- Dash nos. of this drawing correspond to Dash nos. of AS-568 uniform dash numbering system for O-rings. 6. For installation with anti-rotation pin, use part no. TF 558.

Ordering Information

Example: TF 516-214-A
 Piston Ring Set No. 1
 Size Dash No. 2
 Alternate 17-7PH Expander Mat'l



PISTON RING INSTALLATION FOR MIL-P-5514 (C, D, & E REVISIONS)

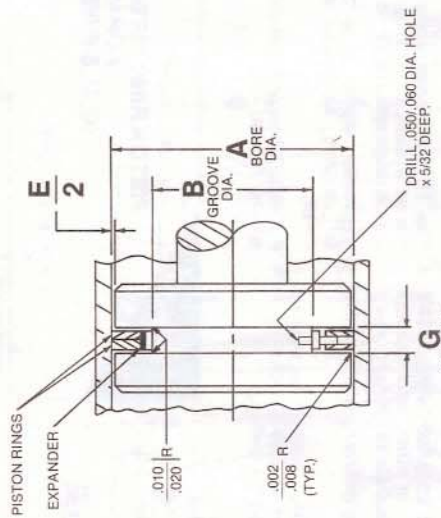
TETRAFLUOR INC., 2051 EAST MAPLE AVENUE, EL SEGUNDO, CALIFORNIA 90245

CODE IDENT.

07128

TF 516

Dash No.	A		B		G		Dash No.	A		B		G		Dash No.	A		B		G				
	+0.002 -0.000	+0.004 -0.004	.430	.428	.491	.126		.126	.126	+0.002 -0.000	+0.004 -0.004	2.186	2.311		2.436	.126	.126	.126	+0.003 -0.004	4.974	4.414	4.539	4.664
112	.676	.801	.430	.428	.491	.126	331	2.620	2.186	2.186	2.311	2.436	.126	425	4.974	4.414	4.539	4.664	.189	.189	.189		
113	.738	.801	.428	.428	.491	.126	332	2.745	2.311	2.311	2.436	.126	426	5.099	4.539	4.539	4.664	.189	.189	.189			
114	.801	.801	.428	.428	.491	.126	333	2.870	2.436	2.436	2.436	.126	427	5.224	4.664	4.664	4.664	.189	.189	.189			
115	.863	.806	.553	.553	.806	.126	334	2.995	2.561	2.561	2.561	.126	428	5.349	4.789	4.789	4.789	.189	.189	.189			
116	.926	.806	.616	.616	.806	.126	335	3.120	2.686	2.686	2.686	.126	429	5.474	4.914	4.914	4.914	.189	.189	.189			
210	.991	.806	.681	.681	.806	.126	336	3.245	2.811	2.811	2.811	.126	430	5.599	5.039	5.039	5.039	.189	.189	.189			
211	1.053	.806	.743	.743	.806	.126	337	3.369	2.935	2.935	2.935	.126	431	5.724	5.164	5.164	5.164	.189	.189	.189			
212	1.116	.806	.806	.806	.806	.126	338	3.494	3.060	3.060	3.060	.126	432	5.849	5.289	5.289	5.289	.189	.189	.189			
213	1.178	.868	.868	.868	.868	.126	339	3.619	3.185	3.185	3.185	.126	433	5.974	5.414	5.414	5.414	.189	.189	.189			
214	1.241	.931	.931	.931	.931	.126	340	3.744	3.310	3.310	3.310	.126	434	6.099	5.539	5.539	5.539	.189	.189	.189			
215	1.303	.993	.993	.993	.993	.126	341	3.869	3.435	3.435	3.435	.126	435	6.224	5.664	5.664	5.664	.189	.189	.189			
216	1.366	1.056	1.056	1.056	1.056	.126	342	3.994	3.560	3.560	3.560	.126	436	6.349	5.789	5.789	5.789	.189	.189	.189			
217	1.428	.994	.994	.994	.994	.126	343	4.119	3.559	3.559	3.559	.126	437	6.474	5.914	5.914	5.914	.189	.189	.189			
218	1.491	1.057	1.057	1.057	1.057	.126	344	4.244	3.684	3.684	3.684	.126	438	6.724	6.164	6.164	6.164	.189	.189	.189			
219	1.553	1.119	1.119	1.119	1.119	.126	345	4.369	3.809	3.809	3.809	.126	439	6.974	6.414	6.414	6.414	.189	.189	.189			
220	1.616	1.182	1.182	1.182	1.182	.126	346	4.494	3.934	3.934	3.934	.126	440	7.224	6.664	6.664	6.664	.189	.189	.189			
221	1.678	1.244	1.244	1.244	1.244	.126	347	4.619	4.059	4.059	4.059	.126	441	7.474	6.914	6.914	6.914	.189	.189	.189			
222	1.741	1.307	1.307	1.307	1.307	.126	348	4.744	4.184	4.184	4.184	.126	442	7.724	7.164	7.164	7.164	.189	.189	.189			
325	1.870	1.436	1.436	1.436	1.436	.126	349	4.869	4.309	4.309	4.309	.126	443	7.974	7.414	7.414	7.414	.189	.189	.189			
326	1.935	1.561	1.561	1.561	1.561	.126	349	4.869	4.309	4.309	4.309	.126	444	8.224	7.664	7.664	7.664	.189	.189	.189			
327	2.120	1.686	1.686	1.686	1.686	.126	349	4.869	4.309	4.309	4.309	.126	445	8.474	7.914	7.914	7.914	.189	.189	.189			
328	2.245	1.811	1.811	1.811	1.811	.126	349	4.869	4.309	4.309	4.309	.126	446	8.974	8.414	8.414	8.414	.189	.189	.189			
329	2.370	1.936	1.936	1.936	1.936	.126	349	4.869	4.309	4.309	4.309	.126	447	9.474	8.914	8.914	8.914	.189	.189	.189			
330	2.495	2.061	2.061	2.061	2.061	.126	349	4.869	4.309	4.309	4.309	.126	447	9.474	8.914	8.914	8.914	.189	.189	.189			



ANTI-ROTATION FEATURE

Dash No.	E
112-334	.005
335-342	.006
343-349	.007
425 & UP	.008

Diametral Clearance Max.

Notes:

- Piston rings are supplied in virgin TFE per MIL-R-8791. For other mat'l callouts refer to Technical Data section.
- Bore dimensions conform to MIL-P-5514 C, D & E.
- Dash nos. of this drawing correspond to Dash nos. of AS-568 uniform dash numbering system for O-rings.
- The TF 558 series piston ring is furnished in sets consisting of two TF 559 piston rings, one TF 560 expander and one TF 006 anti-rotation pin.
- Expander Mat'l: Type 301 stainless steel per MIL-S-5059; Alternate Mat'l: 17-7PH CRES.
- For installation without anti-rotation pin, use part no. TF 565 or TF 516 configurations.

Ordering Information

Example: TF 558-214-A
 Piston Ring Set No. 214
 Size Dash No. A
 Alternate 17-7PH Expander Mat'l



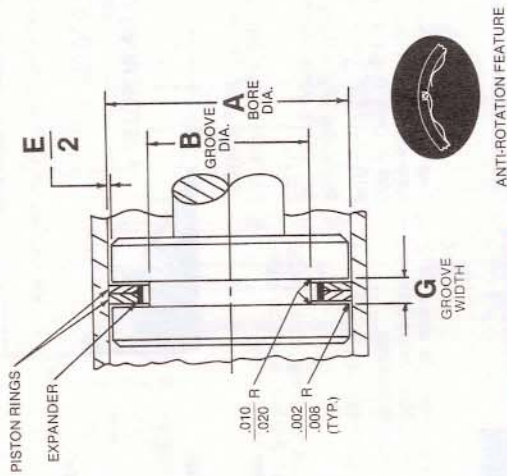
PISTON RING INSTALLATION FOR MIL-P-5514 (C, D, & E REVISIONS)

TETRAFLUOR INC., 2051 EAST MAPLE AVENUE, EL SEGUNDO, CALIFORNIA 90245

CODE IDENT.

07128

TF 558



Dash No.	A		B		G		Dash No.	A		B		G	
	+ .002 - .000	+ .004 - .004	+ .001 - .001	+ .004 - .004	+ .002 - .000	+ .004 - .004		+ .001 - .001	+ .003 - .000	+ .004 - .004	+ .004 - .004	+ .001 - .001	
112	.676	.430	.126	2.186	2.620	2.186	425	4.974	4.414	.189			
113	.738	.428	.126	2.311	2.745	2.311	426	5.099	4.539	.189			
114	.801	.491	.126	2.436	2.870	2.436	427	5.224	4.664	.189			
115	.863	.553	.126										
116	.926	.616	.126										
210	.991	.681	.126										
211	1.053	.743	.126										
212	1.116	.806	.126										
213	1.178	.868	.126										
214	1.241	.931	.126										
215	1.303	.993	.126										
216	1.366	1.056	.126										
217	1.428	.994	.126										
218	1.491	1.057	.126										
219	1.553	1.119	.126										
220	1.616	1.182	.126										
221	1.678	1.244	.126										
222	1.741	1.307	.126										
325	1.870	1.436	.126										
326	1.995	1.561	.126										
327	2.120	1.686	.126										
328	2.245	1.811	.126										
329	2.370	1.936	.126										
330	2.495	2.061	.126										
331													
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Dash No.	E Diametral Clearance Max.
112-334	.005
335-342	.006
343-349	.007
425 & UP	.008

Notes:

- Piston rings are supplied in virgin TFE per MIL-R-8791. For other mat'l callouts refer to Technical Data section.
- Bore dimensions conform to MIL-P-5514 C, D & E.
- Dash nos. of this drawing correspond to Dash nos. of AS-568 uniform dash numbering system for O-rings.
- The TF 565 series piston ring is furnished in sets consisting of two TF 566 piston rings and one TF 567 expander.
- Expander Mat'l: Type 301 S.S. per MIL-S-5059; Alternate Mat'l: 17-7PH CRES.
- For installation with anti-rotation pin, use part no. TF 558.

Ordering Information
 Example: TF 565-214-A
 Piston Ring Set No. 1
 Size Dash No. 1
 Alternate 17-7PH Expander Mat'l

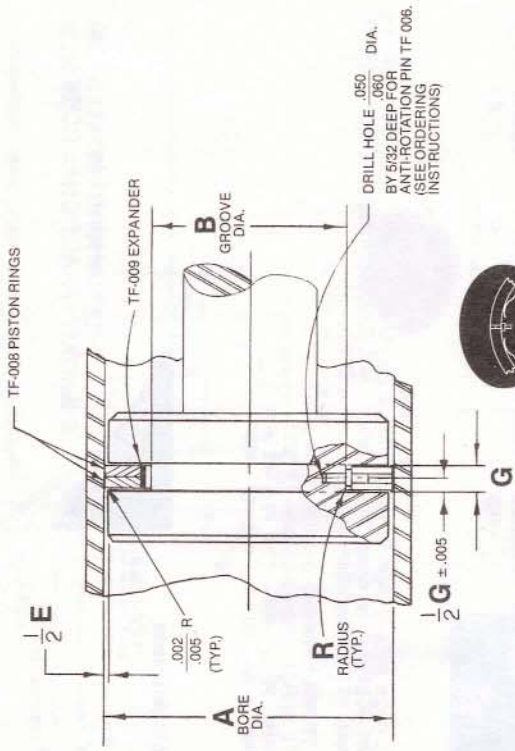


PISTON RING INSTALLATION FOR MIL-P-5514 (C, D, & E REVISIONS)

CODE IDENT.
07128

TF 565

Dash No.	A Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 - .001	+ .004 - .004		+ .002 - .000	+ .004 - .004		+ .003 - .000	+ .004 - .004
8	.500	.254	37	2.312	1.880	65	4.125	3.565
9	.562	.316	38	2.375	1.943	66	4.250	3.690
10	.625	.379	39	2.437	2.005	67	4.375	3.815
11	.687	.441	40	2.500	2.068	68	4.500	3.940
12	.750	.442	41	2.562	2.130	69	4.625	4.065
13	.812	.504	42	2.625	2.193	70	4.750	4.190
14	.875	.567	43	2.687	2.255	71	4.875	4.315
15	.937	.629	44	2.750	2.318	72	5.000	4.440
16	1.000	.692	45	2.812	2.380	73	5.125	4.565
17	1.062	.754	46	2.875	2.443	74	5.250	4.690
18	1.125	.817	47	2.937	2.505	75	5.375	4.815
19	1.187	.879	48	3.000	2.568	76	5.500	4.940
20	1.250	.942	49	3.062	2.630	77	5.625	5.065
21	1.312	1.004	50	3.125	2.693	78	5.750	5.190
22	1.375	1.067	51	3.187	2.755	79	5.875	5.315
23	1.437	1.005	52	3.250	2.818	80	6.000	5.440
24	1.500	1.068	53	3.312	2.880	81	6.125	5.565
25	1.562	1.130	54	3.375	2.943	82	6.250	5.690
26	1.625	1.193	55	3.437	3.005	83	6.375	5.815
27	1.687	1.255	56	3.500	3.068	84	6.500	5.940
28	1.750	1.318	57	3.562	3.130	85	6.625	6.065
29	1.812	1.380	58	3.625	3.193	86	6.750	6.190
30	1.875	1.443	59	3.687	3.255	87	6.875	6.315
31	1.937	1.505	60	3.750	3.318	88	7.000	6.440
32	2.000	1.568	61	3.812	3.380	89	7.250	6.690
33	2.062	1.630	62	3.875	3.443	90	7.500	6.940
34	2.125	1.693	63	3.937	3.505	91	7.750	7.190
35	2.187	1.755	64	4.000	3.568	92	8.000	7.440
36	2.250	1.818				93	8.500	7.940
						94	9.000	8.440
						95	9.500	8.940



Dash No.	G Groove Width +.001 - .001	R Groove Radius Max.	E Diametral Clearance Max.
8-64	.126	.020	.005
65-95	.189	.030	.007

Notes:
 1. Piston rings are supplied in virgin TFE per MIL-R-8791. For other mat'l callouts refer to Technical Data section.
 2. Each TF 010 assembly consists of two TF 008 piston rings, one TF 009 ex-

pander and one TF006 anti-rotation pin. Rings are to be rotated at installation so that step cuts are 180° apart.
 3. Expander Mat'l: Type 301 S.S. per MIL-S-5059; Alternate Mat'l: 17-7PH CRES.

Ordering Instructions

Example: TF010-19-T
 Basic P/N
 Size Dash No.
 Anti-Rotation Pin
 (if required)

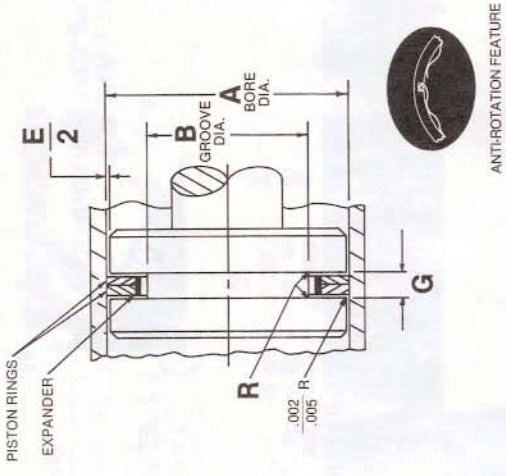


**PISTON RING INSTALLATION
 STANDARD FRACTIONAL BORE SIZE**

CODE IDENT.
07128

TF 010

Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001	- .001		+ .004	- .004		+ .002	- .000		+ .003	- .000
8	.500	.562	37	2.312	1.880	65	4.125	3.565			
9	.562	.316	38	2.375	1.943	66	4.250	3.690			
10	.625	.379	39	2.437	2.005	67	4.375	3.815			
11	.687	.441	40	2.500	2.068	68	4.500	3.940			
12	.750	.442	41	2.562	2.130	69	4.625	4.065			
13	.812	.504	42	2.625	2.193	70	4.750	4.190			
14	.875	.567	43	2.687	2.255	71	4.875	4.315			
15	.937	.629	44	2.750	2.318	72	5.000	4.440			
16	1.000	.692	45	2.812	2.380	73	5.125	4.565			
17	1.062	.754	46	2.875	2.443	74	5.250	4.690			
18	1.125	.817	47	2.937	2.505	75	5.375	4.815			
19	1.187	.879	48	3.000	2.568	76	5.500	4.940			
20	1.250	.942	49	3.062	2.630	77	5.625	5.065			
21	1.312	1.004	50	3.125	2.693	78	5.750	5.190			
22	1.375	1.067	51	3.187	2.755	79	5.875	5.315			
23	1.437	1.005	52	3.250	2.818	80	6.000	5.440			
24	1.500	1.068	53	3.312	2.880	81	6.125	5.565			
25	1.562	1.130	54	3.375	2.943	82	6.250	5.690			
26	1.625	1.193	55	3.437	3.005	83	6.375	5.815			
27	1.687	1.255	56	3.500	3.068	84	6.500	5.940			
28	1.750	1.318	57	3.562	3.130	85	6.625	6.065			
29	1.812	1.380	58	3.625	3.193	86	6.750	6.190			
30	1.875	1.443	59	3.687	3.255	87	6.875	6.315			
31	1.937	1.505	60	3.750	3.318	88	7.000	6.440			
32	2.000	1.568	61	3.812	3.380	89	7.250	6.690			
33	2.062	1.630	62	3.875	3.443	90	7.500	6.940			
34	2.125	1.693	63	3.937	3.505	91	7.750	7.190			
35	2.187	1.755	64	4.000	3.568	92	8.000	7.440			
36	2.250	1.818				93	8.500	7.940			
						94	9.000	8.440			
						95	9.500	8.940			



Dash No.	G Groove Width + .001 - .001	R Groove Radius Max.	E Diametral Clearance Max.
8-64	.126	.020	.005
65-95	.189	.030	.007

Notes:

- Piston rings are supplied in virgin TFE per MIL-R-8791. For other mat'l callouts refer to Technical Data section.
- Each TF 568 assembly consists of two TF 052 piston rings and one TF 569 expander. Rings are to be rotated at installation so that step cuts are 180° apart.
- Expander Mat'l: Type 301 S.S. per MIL-S-5059; Alternate Mat'l: 17-7PH CRES.

Ordering Instructions

Example: TF 568-19-A
 Basic P/N
 Size Dash No.
 Alternate
 17-7PH Expander Mat'l



**PISTON RING INSTALLATION
STANDARD FRACTIONAL BORE SIZE**

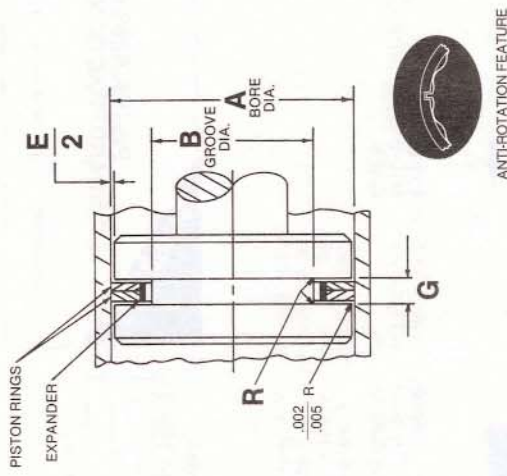
TETRAFLUOR INC., 2051 EAST MAPLE AVENUE EL SEGUNDO, CALIFORNIA 90245

CODE IDENT.

07128

TF 568

Dash No.	A Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 - .001	.500 .562 .625		+ .002 - .000	2.312 2.375 2.437		+ .004 - .004	1.880 1.943 2.005
8			37			65		
9			38			66		
10			39			67		
11			40			68		
12			41			69		
13			42			70		
14			43			71		
15			44			72		
16			45			73		
17			46			74		
18			47			75		
19			48			76		
20			49			77		
21			50			78		
22			51			79		
23			52			80		
24			53			81		
25			54			82		
26			55			83		
27			56			84		
28			57			85		
29			58			86		
30			59			87		
31			60			88		
32			61			89		
33			62			90		
34			63			91		
35			64			92		
36						93		



Dash No.	G Groove Width + .001 - .001	R Groove Radius Max.	E Diametral Clearance Max.
8-64	.126	.020	.005
65-95	.189	.030	.007

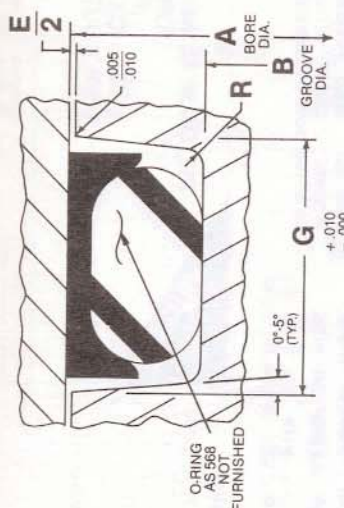
Notes:
 1. Piston rings are supplied in virgin TFE 3. Expander Mat'l: Type 301 S.S. per MIL-R-8791. For other mat'l callouts refer to Technical Data section.
 2. Each TF 639 assembly consists of two TF 052 piston rings and one TF 551 expander. Rings are to be rotated at installation so that step cuts are 180° apart.

Ordering Instructions
 Example: TF 639-19-A
 Basic P/N
 Size Dash No.
 Alternate 17-7PH Expander Mat'l

Tetralon
 PISTON RING INSTALLATION
 STANDARD FRACTIONAL BORE SIZE

CODE IDENT.
07128

TF 639



Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
012	+ .001 - .000	+ .000 - .001	145	+ .002 - .000	+ .000 - .002	336	+ .002 - .000	+ .000 - .002
013	.550	.438	146	2.743	2.565	337	3.243	2.871
014	.613	.501	147	2.805	2.627	338	3.368	2.996
015	.675	.563	148	2.868	2.690	339	3.493	3.121
016	.738	.627	149	2.930	2.752	340	3.618	3.246
017	.800	.688	150	2.993	2.815	341	3.743	3.371
018	.863	.751	151	3.056	2.878	342	3.868	3.496
019	.925	.813	152	3.119	2.941	343	3.993	3.621
020	.991	.879	153	3.182	3.004	344	4.118	3.746
021	1.053	.941	154	3.245	3.067	345	4.243	3.871
022	1.116	1.004	155	3.308	3.130	346	4.368	3.996
023	1.178	1.066	156	3.371	3.193	347	4.493	4.121
024	1.241	1.129	157	3.434	3.256	348	4.618	4.246
025	1.303	1.191	158	3.497	3.319	349	4.743	4.371
026	1.366	1.254	159	3.560	3.382	425	4.868	4.496
027	1.428	1.316	160	3.623	3.445	426	4.993	4.621
028	1.491	1.379	161	3.686	3.508	427	5.118	4.746
110	.550	.438	162	3.749	3.571	428	5.243	4.871
111	.613	.501	163	3.812	3.634	429	5.368	5.000
112	.675	.563	164	3.875	3.697	430	5.493	5.125
113	.738	.627	165	3.938	3.760	431	5.618	5.250
114	.800	.688	166	4.001	3.823	432	5.743	5.375
115	.863	.751	167	4.064	3.886	433	5.868	5.500
116	.925	.813	168	4.127	3.949	434	5.993	5.625
117	.991	.879	169	4.190	4.012	435	6.118	5.750
118	1.053	.941	170	4.253	4.075	436	6.243	5.875
119	1.116	1.004	171	4.316	4.138	437	6.368	6.000
120	1.178	1.066	172	4.379	4.201	438	6.493	6.125
121	1.241	1.129	173	4.442	4.264	439	6.618	6.250
122	1.303	1.191	174	4.505	4.327	440	6.743	6.375
123	1.366	1.254	175	4.568	4.390	441	6.868	6.500
124	1.428	1.316	176	4.631	4.453	442	6.993	6.625
125	1.491	1.379	177	4.694	4.516	443	7.118	6.750
126	1.553	1.441	178	4.757	4.579	444	7.243	6.875
127	1.616	1.504	179	4.820	4.642	445	7.368	7.000
128	1.678	1.566	180	4.883	4.705	446	7.493	7.125
129	1.741	1.629	181	4.946	4.768	447	7.618	7.250
130	1.803	1.691	182	5.009	4.831	448	7.743	7.375
131	1.866	1.754	183	5.072	4.894	449	7.868	7.500
132	1.928	1.816	184	5.135	4.957	450	7.993	7.625
133	1.991	1.879	185	5.198	5.020	451	8.118	7.750
134	2.053	1.941	186	5.261	5.083	452	8.243	7.875
135	2.116	2.004	187	5.324	5.146	453	8.368	8.000
136	2.178	2.066	188	5.387	5.209	454	8.493	8.125
137	2.241	2.129	189	5.450	5.272	455	8.618	8.250
138	2.303	2.191	190	5.513	5.335	456	8.743	8.375
139	2.366	2.254	191	5.576	5.398	457	8.868	8.500
140	2.428	2.316	192	5.639	5.461	458	8.993	8.625
141	2.491	2.379	193	5.702	5.524	459	9.118	8.750
142	2.553	2.441	194	5.765	5.587	460	9.243	8.875
143	2.616	2.504	195	5.828	5.650	460	9.368	9.000
144	2.678	2.566	196	5.891	5.713	460	9.493	9.125

Dash No.	G Groove Width + .010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.094	.005-.015	.004
013-028	.094	.005-.015	.005
110-129	.141	.005-.015	.005
130-140	.141	.005-.015	.006
141-149	.141	.005-.015	.007
210-222	.188	.010-.025	.005
223-227	.188	.010-.025	.006
228-243	.188	.010-.025	.007
244-247	.188	.010-.025	.008
325-329	.281	.020-.035	.006
330-345	.281	.020-.035	.007
346-349	.281	.020-.035	.008
425-445	.375	.020-.035	.009
446	.375	.020-.035	.010
447-460	.375	.020-.035	.011

Notes:

- This part is supplied in long wearing Tetralon[®], for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring size is same as seal dash size.
- Suitable for use with MIL-P-83461 O-rings in MIL-H-83282 hydraulic fluid as well as with all standard hydraulic fluids and O-ring compounds.
- Sidewall notches optional.
- This part also supplied with Mini grooves[®], add "M" after basic part no. for Minigroove configuration.

Ordering Instructions
 Example: TF 936M-214N
 Basic P/N TF 936M-214N
 For Minigroove only
 Size Dash No.
 For optional notches only

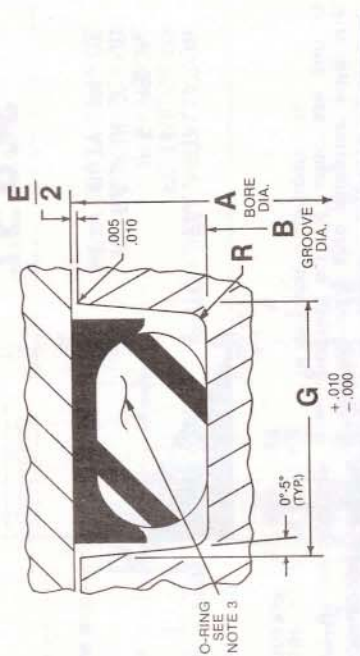
PISTON SEAL INSTALLATION FOR MIL-G-5514 (F REVISION) NO BACK-UP GLAND HEAVY DUTY SERVICE



CODE IDENT
07128

TF 936

Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
012	+ .001 - .000	+ .000 - .001	145	+ .002 - .000	+ .000 - .002	336	+ .002 - .000	+ .000 - .002
013	.485	.373	146	2.743	2.565	337	3.243	2.871
014	+ .000 - .000	+ .000 - .002	147	2.805	2.627	338	3.368	2.996
015	.550	.438	148	2.868	2.690	339	3.493	3.121
016	.613	.501	149	2.930	2.752	340	3.618	3.246
017	.675	.563	210	2.993	2.815	341	3.743	3.371
018	.738	.627	211	.991	.748	342	3.868	3.496
019	.800	.688	212	1.053	.810	343	3.993	3.621
020	.863	.751	213	1.116	.873	344	4.118	3.746
021	.925	.813	214	1.178	.935	345	4.243	3.871
022	.991	.879	215	1.241	.998	346	4.368	3.996
023	1.053	.941	216	1.303	1.060	347	4.493	4.121
024	1.116	1.004	217	1.366	1.123	348	4.618	4.246
025	1.178	1.066	218	1.428	1.185	349	4.743	4.371
026	1.241	1.129	219	1.491	1.248		4.868	4.496
027	1.303	1.191	220	1.553	1.310		+ .003 - .000	+ .000 - .003
028	1.366	1.254	221	1.616	1.373	425	4.974	4.497
110	1.428	1.316	222	1.678	1.435	426	5.099	4.622
111	1.491	1.379	223	1.741	1.498	427	5.224	4.747
112	1.553	1.441	224	1.803	1.561	428	5.349	4.872
113	1.616	1.504	225	1.866	1.624	429	5.474	4.997
114	1.678	1.567	226	1.928	1.687	430	5.599	5.122
115	1.741	1.630	227	2.000	1.750	431	5.724	5.247
116	1.803	1.693	228	2.062	1.813	432	5.849	5.372
117	1.866	1.756	229	2.125	1.875	433	5.974	5.497
118	1.928	1.819	230	2.188	1.938	434	6.099	5.622
119	1.991	1.882	231	2.250	2.000	435	6.224	5.747
120	2.053	1.945	232	2.313	2.063	436	6.349	5.872
121	2.116	2.008	233	2.375	2.125	437	6.474	5.997
122	2.178	2.071	234	2.438	2.188	438	6.600	6.122
123	2.241	2.134	235	2.500	2.250	439	6.724	6.247
124	2.303	2.197	236	2.562	2.313	440	6.849	6.372
125	2.366	2.260	237	2.625	2.375	441	6.974	6.497
126	2.428	2.323	238	2.688	2.438	442	7.100	6.622
127	2.491	2.386	239	2.750	2.500	443	7.224	6.747
128	2.553	2.449	240	2.813	2.563	444	7.349	6.872
129	2.616	2.512	241	2.875	2.625	445	7.474	6.997
130	2.678	2.575	242	2.938	2.688	446	7.600	7.122
131	2.741	2.638	243	3.000	2.750		7.724	7.247
132	2.803	2.701	244	3.062	2.813		7.849	7.372
133	2.866	2.764	245	3.125	2.875		7.974	7.497
134	2.928	2.827	246	3.188	2.938		8.100	7.622
135	2.991	2.890	247	3.250	3.000		8.224	7.747
136	3.053	2.953	248	3.313	3.063		8.349	7.872
137	3.116	3.016	249	3.375	3.125		8.474	7.997
138	3.178	3.079	250	3.438	3.188		8.600	8.122
139	3.241	3.142	251	3.500	3.250		8.724	8.247
140	3.303	3.205	252	3.562	3.313		8.849	8.372
141	3.366	3.268	253	3.625	3.375		8.974	8.497
142	3.428	3.331	254	3.688	3.438		9.100	8.622
143	3.491	3.394	255	3.750	3.500		9.224	8.747
144	3.553	3.457	256	3.813	3.563		9.349	8.872
			257	3.875	3.625		9.474	9.000
			258	3.938	3.688		9.600	9.122
			259	4.000	3.750		9.724	9.247
			260	4.062	3.813		9.849	9.372
			261	4.125	3.875		9.974	9.497
			262	4.188	3.938		10.100	9.622
			263	4.250	4.000		10.224	9.747
			264	4.313	4.063		10.349	9.872
			265	4.375	4.125		10.474	10.000
			266	4.438	4.188		10.600	10.122
			267	4.500	4.250		10.724	10.247
			268	4.562	4.313		10.849	10.372
			269	4.625	4.375		10.974	10.497
			270	4.688	4.438		11.100	10.622
			271	4.750	4.500		11.224	10.747
			272	4.813	4.563		11.349	10.872
			273	4.875	4.625		11.474	11.000
			274	4.938	4.688		11.600	11.122
			275	5.000	4.750		11.724	11.247
			276	5.062	4.813		11.849	11.372
			277	5.125	4.875		11.974	11.497
			278	5.188	4.938		12.100	11.622
			279	5.250	5.000		12.224	11.747
			280	5.313	5.063		12.349	11.872
			281	5.375	5.125		12.474	12.000
			282	5.438	5.188		12.600	12.122
			283	5.500	5.250		12.724	12.247
			284	5.562	5.313		12.849	12.372
			285	5.625	5.375		12.974	12.497
			286	5.688	5.438		13.100	12.622
			287	5.750	5.500		13.224	12.747
			288	5.813	5.563		13.349	12.872
			289	5.875	5.625		13.474	13.000
			290	5.938	5.688		13.600	13.122
			291	6.000	5.750		13.724	13.247
			292	6.062	5.813		13.849	13.372
			293	6.125	5.875		13.974	13.497
			294	6.188	5.938		14.100	13.622
			295	6.250	6.000		14.224	13.747
			296	6.313	6.063		14.349	13.872
			297	6.375	6.125		14.474	14.000
			298	6.438	6.188		14.600	14.122
			299	6.500	6.250		14.724	14.247
			300	6.562	6.313		14.849	14.372
			301	6.625	6.375		14.974	14.497
			302	6.688	6.438		15.100	14.622
			303	6.750	6.500		15.224	14.747
			304	6.813	6.563		15.349	14.872
			305	6.875	6.625		15.474	15.000
			306	6.938	6.688		15.600	15.122
			307	7.000	6.750		15.724	15.247
			308	7.062	6.813		15.849	15.372
			309	7.125	6.875		15.974	15.497
			310	7.188	6.938			



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.149	.005-.015	.004
013-028	.149	.005-.015	.005
110-129	.183	.005-.015	.005
130-140	.183	.005-.015	.006
141-149	.183	.005-.015	.007
210-222	.235	.010-.025	.005
223-227	.235	.010-.025	.006
228-243	.235	.010-.025	.007
244-247	.235	.010-.025	.008
325-329	.334	.020-.035	.006
330-345	.334	.020-.035	.007
346-349	.334	.020-.035	.008
425-445	.475	.020-.035	.009
446	.475	.020-.035	.010
447-460	.475	.020-.035	.011

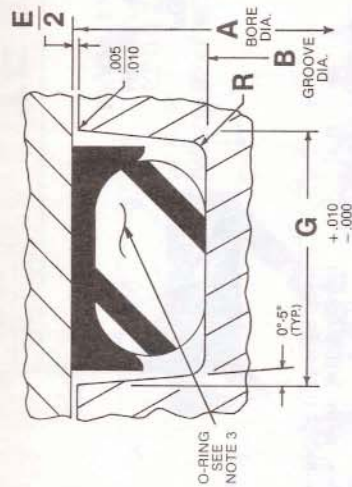
Notes:

- This part is supplied in long wearing Tetralon[®], for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring size is same as seal dash size.
- Suitable for use with MIL-P-83461 Orings in MIL-H-83282 hydraulic fluid as well as with all standard hydraulic fluids and O-ring compounds.
- Sidewall notches optional.
- This part also supplied with Mini grooves; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions
 Example: TF 873 M-214 N
 Basic P/N
 For Minigroove only
 Size Dash No.
 For optional notches only

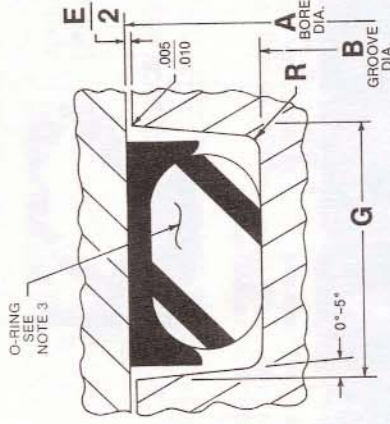
Tetralon
PISTON SEAL INSTALLATION FOR MIL-G-5514 (F REVISION) ONE BACK-UP GLAND HEAVY DUTY SERVICE

CODE IDENT
07128
TF 873



Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
012	+ .001 - .001	+ .000 - .001	145	+ .002 - .000	+ .000 - .002	336	+ .002 - .000	+ .000 - .002
013	.485	.373	146	2.743	2.565	337	3.243	2.871
014	+ .002 - .000	+ .000 - .002	147	2.805	2.627	338	3.368	2.996
015	.550	.438	148	2.868	2.690	339	3.493	3.121
016	.613	.501	149	2.930	2.752	340	3.618	3.246
017	.738	.627	210	2.993	2.815	341	3.743	3.371
018	.800	.688	211	.991	.748	342	3.868	3.496
019	.863	.751	212	1.053	.810	343	3.993	3.621
020	.925	.813	213	1.116	.873	344	4.118	3.746
021	.991	.879	214	1.178	.935	345	4.243	3.871
022	1.053	.941	215	1.241	.998	346	4.368	3.996
023	1.116	1.004	216	1.303	1.060	347	4.493	4.121
024	1.178	1.066	217	1.366	1.123	348	4.618	4.246
025	1.241	1.129	218	1.428	1.185	349	4.743	4.371
026	1.303	1.191	219	1.491	1.248		4.868	4.496
027	1.366	1.254	220	1.553	1.310		+ .003 - .000	+ .000 - .003
028	1.428	1.316	221	1.616	1.373	425	4.974	4.497
110	.550	.372	222	1.678	1.435	426	5.099	4.622
111	.613	.435	223	1.741	1.498	427	5.224	4.747
112	.675	.497	224	1.803	1.561	428	5.349	4.872
113	.738	.560	225	1.867	1.624	429	5.474	4.997
114	.800	.622	226	1.930	1.687	430	5.599	5.122
115	.863	.685	227	1.993	1.750	431	5.724	5.247
116	.925	.747	228	2.056	1.813	432	5.849	5.372
117	.991	.813	229	2.119	1.876	433	5.974	5.497
118	1.053	.875	230	2.182	1.939	434	6.099	5.622
119	1.116	.938	231	2.245	2.002	435	6.224	5.747
120	1.178	1.000	232	2.308	2.065	436	6.349	5.872
121	1.241	1.063	233	2.371	2.128	437	6.474	5.997
122	1.303	1.125	234	2.434	2.191	438	6.599	6.122
123	1.366	1.188	235	2.497	2.254	439	6.724	6.247
124	1.428	1.250	236	2.560	2.317	440	6.849	6.372
125	1.491	1.313	237	2.623	2.380	441	6.974	6.497
126	1.553	1.375	238	2.686	2.443	442	7.099	6.622
127	1.616	1.438	239	2.749	2.506	443	7.224	6.747
128	1.678	1.500	240	2.812	2.569	444	7.349	6.872
129	1.741	1.563	241	2.875	2.632	445	7.474	6.997
130	1.805	1.627	242	2.938	2.695	446	7.599	7.122
131	1.867	1.689	243	3.001	2.758		7.724	7.247
132	1.930	1.752	244	3.064	2.821		7.849	7.372
133	1.992	1.814	245	3.127	2.884		7.974	7.497
134	2.055	1.877	246	3.190	2.947		8.099	7.622
135	2.118	1.940	247	3.253	3.010		8.224	7.747
136	2.180	2.002	248	3.316	3.073		8.349	7.872
137	2.243	2.065	249	3.379	3.136		8.474	7.997
138	2.305	2.127	250	3.442	3.199		8.599	8.122
139	2.368	2.190	251	3.505	3.262		8.724	8.247
140	2.430	2.252	252	3.568	3.325		8.849	8.372
141	2.493	2.315	253	3.631	3.388		8.974	8.497
142	2.555	2.377	254	3.694	3.451		9.099	8.622
143	2.618	2.440	255	3.757	3.514		9.224	8.747
144	2.680	2.502	256	3.820	3.577		9.349	8.872
			257	3.883	3.640		9.474	8.997
			258	3.946	3.703		9.599	9.122
			259	4.009	3.766		9.724	9.247
			260	4.072	3.829		9.849	9.372
			261	4.135	3.892		9.974	9.497
			262	4.198	3.955		10.099	9.622
			263	4.261	4.018		10.224	9.747
			264	4.324	4.081		10.349	9.872
			265	4.387	4.144		10.474	9.997
			266	4.450	4.207		10.599	10.122
			267	4.513	4.270		10.724	10.247
			268	4.576	4.333		10.849	10.372
			269	4.639	4.396		10.974	10.497
			270	4.702	4.459		11.099	10.622
			271	4.765	4.522		11.224	10.747
			272	4.828	4.585		11.349	10.872
			273	4.891	4.648		11.474	10.997
			274	4.954	4.711		11.599	11.122
			275	5.017	4.774		11.724	11.247
			276	5.080	4.837		11.849	11.372
			277	5.143	4.900		11.974	11.497
			278	5.206	4.963		12.099	11.622
			279	5.269	5.026		12.224	11.747
			280	5.332	5.089		12.349	11.872
			281	5.395	5.152		12.474	11.997
			282	5.458	5.215		12.599	12.122
			283	5.521	5.278		12.724	12.247
			284	5.584	5.341		12.849	12.372
			285	5.647	5.404		12.974	12.497
			286	5.710	5.467		13.099	12.622
			287	5.773	5.530		13.224	12.747
			288	5.836	5.593		13.349	12.872
			289	5.899	5.656		13.474	12.997
			290	5.962	5.719		13.599	13.122
			291	6.025	5.782		13.724	13.247
			292	6.088	5.845		13.849	13.372
			293	6.151	5.908		13.974	13.497
			294	6.214	5.971		14.099	13.622
			295	6.277	6.034		14.224	13.747
			296	6.340	6.097		14.349	13.872
			297	6.403	6.160		14.474	13.997
			298	6.466	6.223		14.599	14.122
			299	6.529	6.286		14.724	14.247
			300	6.592	6.349		14.849	14.372
			301	6.655	6.412		14.974	14.497
			302	6.718	6.475		15.099	14.622
			303	6.781	6.538		15.224	14.747
			304	6.844	6.601		15.349	14.872
			305	6.907	6.664		15.474	14.997
			306	6.970	6.727		15.599	15.122
			307	7.033	6.790		15.724	15.247
			308	7.096	6.853		15.849	15.372
			309	7.159	6.916		15.974	15.497
			310	7.222	6.979		16.099	15.622
			311	7.285	7.042		16.224	15.747
			312	7.348	7.105		16.349	15.872
			313	7.411	7.168		16.474	15.997
			314	7.474	7.231		16.599	16.122
			315	7.537	7.294		16.724	16.247
			316	7.600	7.357		16.849	16.372
			317	7.663	7.420		16.974	16.497
			318	7.726	7.483		17.099	16.622
			319	7.789	7.546		17.224	16.747
			320	7.852	7.609		17.349	16.872
			321	7.915	7.672		17.474	16.997
			322	7.978	7.735		17.599	17.122
			323	8.041	7.798		17.724	17.247
			324	8.104	7.861		17.849	17.372
			325	8.167	7.924		17.974	17.497
			326	8.230	7.987		18.099	17.622
			327	8.293	8.050		18.224	17.747
			328	8.356	8.113		18.349	17.872
			329	8.419	8.176		18.474	17.997
			330	8.482	8.239		18.599	18.122
			331	8.545	8.302		18.724	18.247
			332	8.608	8.365		18.849	18.372
			333	8.671	8.428		18.974	18.497
			334	8.734	8.491		19.099	18.622
			335	8.797	8.554		19.224	18.747

Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.207	.005-.015	.004
013-028	.207	.005-.015	.005
110-129	.245	.005-.015	.005
130-140	.245	.005-.015	.006
141-149	.245	.005-.015	.007
210-222	.304	.010-.025	.005
223-227	.304	.010-.025	.006
228-243	.304	.010-.025	



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 - .001	+ .000 - .001		+ .000 - .002	+ .000 - .002		+ .002 - .000	+ .000 - .002		+ .002 - .000	+ .000 - .002
012	.485	.373	145	2.743	2.565	336	3.245	2.873	336	3.245	2.873
013	.550	.438	146	2.805	2.627	337	3.369	2.997	337	3.369	2.997
014	.613	.501	147	2.868	2.690	338	3.494	3.122	338	3.494	3.122
015	.675	.563	148	2.930	2.752	339	3.619	3.247	339	3.619	3.247
016	.738	.626	149	.991	.748	340	3.744	3.372	340	3.744	3.372
017	.800	.688	210	1.053	.810	341	3.869	3.497	341	3.869	3.497
018	.863	.751	211	1.116	.873	342	3.994	3.622	342	3.994	3.622
019	.925	.813	212	1.178	.935	343	4.119	3.747	343	4.119	3.747
020	.989	.877	213	1.241	.998	344	4.244	3.872	344	4.244	3.872
021	1.055	.943	214	1.303	1.060	345	4.369	3.997	345	4.369	3.997
022	1.118	1.006	215	1.366	1.123	346	4.494	4.122	346	4.494	4.122
023	1.180	1.068	216	1.428	1.185	347	4.619	4.247	347	4.619	4.247
024	1.243	1.131	217	1.491	1.248	348	4.744	4.372	348	4.744	4.372
025	1.305	1.193	218	1.553	1.310	349	4.869	4.497	349	4.869	4.497
026	1.368	1.256	219	1.616	1.373	425	5.099	4.622	425	5.099	4.622
027	1.430	1.318	220	1.678	1.435	426	5.224	4.747	426	5.224	4.747
028	1.493	1.381	221	1.741	1.498	427	5.349	4.872	427	5.349	4.872
110	.551	.373	222	1.803	1.561	428	5.474	4.997	428	5.474	4.997
111	.613	.435	223	1.866	1.625	429	5.599	5.122	429	5.599	5.122
112	.676	.498	224	1.929	1.688	430	5.724	5.247	430	5.724	5.247
113	.738	.560	225	1.992	1.751	431	5.849	5.372	431	5.849	5.372
114	.801	.623	226	2.055	1.814	432	5.974	5.497	432	5.974	5.497
115	.863	.685	227	2.118	1.877	433	6.099	5.622	433	6.099	5.622
116	.925	.748	228	2.181	1.940	434	6.224	5.747	434	6.224	5.747
117	.989	.811	229	2.243	2.003	435	6.349	5.872	435	6.349	5.872
118	1.056	.878	230	2.306	2.066	436	6.474	5.997	436	6.474	5.997
119	1.118	.940	231	2.368	2.129	437	6.599	6.122	437	6.599	6.122
120	1.181	1.003	232	2.431	2.192	438	6.724	6.247	438	6.724	6.247
121	1.243	1.065	233	2.493	2.255	439	6.849	6.372	439	6.849	6.372
122	1.306	1.128	234	2.556	2.318	440	6.974	6.497	440	6.974	6.497
123	1.368	1.190	235	2.619	2.381	441	7.099	6.622	441	7.099	6.622
124	1.431	1.253	236	2.681	2.444	442	7.224	6.747	442	7.224	6.747
125	1.493	1.315	237	2.744	2.507	443	7.349	6.872	443	7.349	6.872
126	1.558	1.380	238	2.806	2.570	444	7.474	6.997	444	7.474	6.997
127	1.620	1.442	239	2.869	2.633	445	7.599	7.122	445	7.599	7.122
128	1.683	1.505	240	2.931	2.696	446	7.724	7.247	446	7.724	7.247
129	1.742	1.567	241	2.994	2.759	447	7.849	7.372	447	7.849	7.372
130	1.805	1.627	242	3.056	2.822	448	7.974	7.497	448	7.974	7.497
131	1.867	1.689	243	3.119	2.885	449	8.099	7.622	449	8.099	7.622
132	1.930	1.752	244	3.181	2.948	450	8.224	7.747	450	8.224	7.747
133	1.992	1.814	245	3.244	3.011	451	8.349	7.872	451	8.349	7.872
134	2.055	1.877	246	3.306	3.074	452	8.474	7.997	452	8.474	7.997
135	2.118	1.940	247	3.369	3.137	453	8.599	8.122	453	8.599	8.122
136	2.180	2.002	248	3.431	3.200	454	8.724	8.247	454	8.724	8.247
137	2.243	2.065	249	3.494	3.263	455	8.849	8.372	455	8.849	8.372
138	2.305	2.127	250	3.556	3.326	456	8.974	8.497	456	8.974	8.497
139	2.368	2.190	251	3.619	3.389	457	9.099	8.622	457	9.099	8.622
140	2.430	2.252	252	3.681	3.452	458	9.224	8.747	458	9.224	8.747
141	2.493	2.315	253	3.744	3.515	459	9.349	8.872	459	9.349	8.872
142	2.555	2.377	254	3.806	3.578	460	9.474	8.997	460	9.474	8.997
143	2.618	2.440	255	3.869	3.641		9.599	9.122		9.599	9.122
144	2.680	2.502	256	3.931	3.704		9.724	9.247		9.724	9.247

Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.094	.005-.015	.004
013-028	.094	.005-.015	.005
110-149	.141	.005-.015	.005
210-247	.188	.010-.025	.006
325-349	.281	.020-.030	.007
425-460	.375	.020-.030	.010

Notes:

- This part is supplied in long wearing Tetralon®; for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same as seal dash size.
- Suitable for use with MIL-P-83461 O-rings in MIL-H-83282 hydraulic fluid as well as with all standard hydraulic fluids and O-ring compounds.
- Sidewall notches optional.
- This part also supplied with Mini grooves®; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

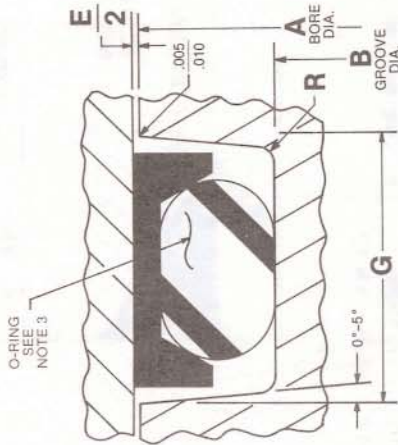


PISTON SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) NO BACK-UP GLAND HEAVY DUTY SERVICE

CODE IDENT. **07128**

TF 876

Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
012	+ .001 - .000	+ .000 - .001	145	+ .002 - .000	+ .000 - .002	336	+ .002 - .002	+ .000 - .002
013	.485	.373	146	2.743	2.565	337	3.245	2.873
014	+ .002 - .000	+ .000 - .002	147	2.805	2.627	338	3.369	2.997
015	.550	.438	148	2.868	2.690	339	3.494	3.122
016	.613	.501	149	2.930	2.752	340	3.619	3.247
017	.675	.563	210	2.993	2.815	341	3.744	3.372
018	.738	.626	211	.991	.748	342	3.869	3.497
019	.800	.688	212	1.053	.810	343	3.994	3.622
020	.863	.751	213	1.116	.873	344	4.119	3.747
021	.925	.813	214	1.178	.935	345	4.244	3.872
022	.993	.881	215	1.241	.998	346	4.369	3.997
023	1.055	.943	216	1.303	1.060	347	4.494	4.122
024	1.118	1.006	217	1.366	1.123	348	4.619	4.247
025	1.180	1.068	218	1.428	1.185	349	4.744	4.372
026	1.243	1.131	219	1.491	1.248		4.869	4.497
027	1.305	1.193	220	1.553	1.310		+ .003 - .000	+ .000 - .003
028	1.368	1.256	221	1.616	1.373	425	4.974	4.497
029	1.430	1.318	222	1.678	1.435	426	5.099	4.622
110	1.493	1.381	223	1.741	1.498	427	5.224	4.747
111	.551	.373	224	1.803	1.561	428	5.349	4.872
112	.613	.435	225	1.866	1.625	429	5.474	4.997
113	.675	.498	226	1.929	1.688	430	5.599	5.122
114	.738	.560	227	1.992	1.751	431	5.724	5.247
115	.801	.623	228	2.055	1.814	432	5.849	5.372
116	.863	.685	229	2.118	1.877	433	5.974	5.497
117	.925	.748	230	2.181	1.940	434	6.099	5.622
118	.988	.811	231	2.244	2.003	435	6.224	5.747
119	1.050	.874	232	2.307	2.066	436	6.349	5.872
120	1.112	.937	233	2.370	2.129	437	6.474	5.997
121	1.175	.999	234	2.433	2.192	438	6.599	6.122
122	1.238	1.062	235	2.496	2.255	439	6.724	6.247
123	1.300	1.125	236	2.559	2.318	440	6.849	6.372
124	1.363	1.188	237	2.622	2.381	441	6.974	6.497
125	1.425	1.251	238	2.685	2.444	442	7.099	6.622
126	1.488	1.314	239	2.748	2.507	443	7.224	6.747
127	1.550	1.377	240	2.811	2.570	444	7.349	6.872
128	1.613	1.440	241	2.874	2.633	445	7.474	6.997
129	1.675	1.503	242	2.937	2.696	446	7.599	7.122
130	1.738	1.566	243	3.000	2.759	447	7.724	7.247
131	1.800	1.629	244	3.063	2.822	448	7.849	7.372
132	1.863	1.692	245	3.126	2.885	449	7.974	7.497
133	1.925	1.755	246	3.189	2.948	450	8.099	7.622
134	2.000	1.818	247	3.252	3.011	451	8.224	7.747
135	2.062	1.881	248	3.315	3.074	452	8.349	7.872
136	2.125	1.944	249	3.378	3.137	453	8.474	7.997
137	2.187	2.007	250	3.441	3.200	454	8.599	8.122
138	2.250	2.070	251	3.504	3.263	455	8.724	8.247
139	2.312	2.133	252	3.567	3.326	456	8.849	8.372
140	2.375	2.196	253	3.630	3.389	457	8.974	8.497
141	2.437	2.259	254	3.693	3.452	458	9.099	8.622
142	2.500	2.322	255	3.756	3.515	459	9.224	8.747
143	2.562	2.385	256	3.819	3.578	460	9.349	8.872
144	2.625	2.448	257	3.882	3.641		9.474	8.997
	2.687	2.511	258	3.945	3.704		9.599	9.122
	2.750	2.574	259	4.008	3.767		9.724	9.247
	2.812	2.637	260	4.071	3.830		9.849	9.372
	2.875	2.700	261	4.134	3.893		9.974	9.497
	2.937	2.763	262	4.197	3.956		10.099	9.622
	3.000	2.826	263	4.260	4.019		10.224	9.747
	3.062	2.889	264	4.323	4.082		10.349	9.872
	3.125	2.952	265	4.386	4.145		10.474	9.997
	3.187	3.015	266	4.449	4.208		10.599	10.122
	3.250	3.078	267	4.512	4.271		10.724	10.247
	3.312	3.141	268	4.575	4.334		10.849	10.372
	3.375	3.204	269	4.638	4.397		10.974	10.497
	3.437	3.267	270	4.701	4.460		11.099	10.622
	3.500	3.330	271	4.764	4.523		11.224	10.747
	3.562	3.393	272	4.827	4.586		11.349	10.872
	3.625	3.456	273	4.890	4.649		11.474	10.997
	3.687	3.519	274	4.953	4.712		11.599	11.122
	3.750	3.582	275	5.016	4.775		11.724	11.247
	3.812	3.645	276	5.079	4.838		11.849	11.372
	3.875	3.708	277	5.142	4.901		11.974	11.497
	3.937	3.771	278	5.205	4.964		12.099	11.622
	4.000	3.834	279	5.268	5.027		12.224	11.747
	4.062	3.897	280	5.331	5.090		12.349	11.872
	4.125	3.960	281	5.394	5.153		12.474	11.997
	4.187	4.023	282	5.457	5.216		12.599	12.122
	4.250	4.086	283	5.520	5.279		12.724	12.247
	4.312	4.149	284	5.583	5.342		12.849	12.372
	4.375	4.212	285	5.646	5.405		12.974	12.497
	4.437	4.275	286	5.709	5.468		13.099	12.622
	4.500	4.338	287	5.772	5.531		13.224	12.747
	4.562	4.401	288	5.835	5.594		13.349	12.872
	4.625	4.464	289	5.898	5.657		13.474	12.997
	4.687	4.527	290	5.961	5.720		13.599	13.122
	4.750	4.590	291	6.024	5.783		13.724	13.247
	4.812	4.653	292	6.087	5.846		13.849	13.372
	4.875	4.716	293	6.150	5.909		13.974	13.497
	4.937	4.779	294	6.213	5.972		14.099	13.622
	5.000	4.842	295	6.276	6.035		14.224	13.747
	5.062	4.905	296	6.339	6.098		14.349	13.872
	5.125	4.968	297	6.402	6.161		14.474	13.997
	5.187	5.031	298	6.465	6.224		14.599	14.122
	5.250	5.094	299	6.528	6.287		14.724	14.247
	5.312	5.157	300	6.591	6.350		14.849	14.372
	5.375	5.220	301	6.654	6.413		14.974	14.497
	5.437	5.283	302	6.717	6.476		15.099	14.622
	5.500	5.346	303	6.780	6.539		15.224	14.747
	5.562	5.409	304	6.843	6.602		15.349	14.872
	5.625	5.472	305	6.906	6.665		15.474	14.997
	5.687	5.535	306	6.969	6.728		15.599	15.122
	5.750	5.598	307	7.032	6.791		15.724	15.247
	5.812	5.661	308	7.095	6.854		15.849	15.372
	5.875	5.724	309	7.158	6.917		15.974	15.497
	5.937	5.787	310	7.221	6.980			
	6.000	5.850	311	7.284	7.043			
	6.062	5.913	312	7.347	7.106			
	6.125	5.976	313	7.410	7.169			
	6.187	6.039	314	7.473	7.232			
	6.250	6.102	315	7.536	7.295			
	6.312	6.165	316	7.599	7.358			
	6.375	6.228	317	7.662	7.421			
	6.437	6.291	318	7.725	7.484			
	6.500	6.354	319	7.788	7.547			
	6.562	6.417	320	7.851	7.610			
	6.625	6.480	321	7.914	7.673			
	6.687	6.543	322	7.977	7.736			
	6.750	6.606	323	8.040	7.799			
	6.812	6.669	324	8.103	7.862			
	6.875	6.732	325	8.166	7.925			
	6.937	6.795	326	8.229	7.988			
	7.000	6.858	327	8.292	8.051			
	7.062	6.921	328	8.355	8.114			
	7.125	6.984	329	8.418	8.177			
	7.187	7.047	330	8.481	8.240			
	7.250	7.110	331	8.544	8.303			
	7.312	7.173	332	8.607	8.366			
	7.375	7.236	333	8.670	8.429			
	7.437	7.299	334	8.733	8.492			
	7.500	7.362	335	8.796	8.555			
	7.562	7.425		8.859	8			



Dash No.	G Groove Width $+0.10 - 0.000$	R Groove Radius	E Diametral Clearance Max.
004-012	.094	.005-.015	.004
013-028	.094	.005-.015	.005
110-127	.141	.005-.015	.005
210-247	.188	.010-.020	.006
325-349	.281	.020-.030	.007
425-460	.375	.020-.030	.008

Notes

1. This part is supplied in virgin TFE. For other material callouts, refer to Technical Data section.
2. Dash nos. correspond to those of AS 568.
3. O-ring supplied on request. Size is same as seal size.
4. Parts Dash Nos. 110 thru 116; 210 thru 222 and 325 thru 349 conform to Boeing SCD BACR12AS and are supplied in VTFE per AMS 3651.
5. Sidewall notches optional.
6. This part also supplied with Minigrooves[®]; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

Ordering Instructions for Boeing Part Number BACR12AS (See Note 4)
 Example: BACR12AS-214
 Basic P/N _____
 Size Dash No. _____



PISTON SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) NO BACK-UP GLAND

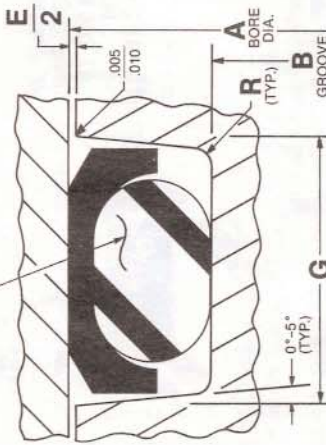
CODE IDENT.

07128

TF 385

Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
004	+0.001 -0.000	+0.000 -0.001	214	+0.002 -0.000	+0.000 -0.002	340	+0.002 -0.000	+0.000 -0.002
005	.190	.076	215	1.241	.998	341	3.744	3.372
006	.221	.108	216	1.060	1.060	342	3.869	3.497
007	.235	.123	217	1.366	1.123	343	3.994	3.622
008	.266	.154	218	1.428	1.185	344	4.119	3.747
009	.297	.185	219	1.491	1.248	345	4.244	3.872
010	.329	.217	220	1.553	1.310	346	4.369	3.997
011	.360	.248	221	1.616	1.373	347	4.494	4.122
012	.422	.310	222	1.678	1.435	348	4.619	4.247
013	.485	.373	223	1.741	1.498	349	4.744	4.372
014	+0.002 -0.002	+0.000 -0.002	224	1.868	1.625	425	4.869	4.497
015	.550	.438	225	1.993	1.750	426	+0.003 -0.000	+0.000 -0.003
016	.613	.501	226	2.118	1.875	427	4.974	4.497
017	.675	.563	227	2.243	2.000	428	5.099	4.622
018	.738	.626	228	2.368	2.125	429	5.224	4.747
019	.800	.688	229	2.493	2.250	430	5.349	4.872
020	.863	.751	230	2.618	2.375	431	5.474	4.997
021	.925	.813	231	2.743	2.500	432	5.599	5.122
022	.988	.876	232	2.868	2.625	433	5.724	5.247
023	1.051	.939	233	2.993	2.750	434	5.849	5.372
024	1.114	1.002	234	3.118	2.875	435	5.974	5.497
025	1.177	1.065	235	3.243	3.000	436	6.099	5.622
026	1.240	1.128	236	3.368	3.125	437	6.224	5.747
027	1.303	1.191	237	3.493	3.250	438	6.349	5.872
028	1.366	1.254	238	3.618	3.375	439	6.474	5.997
110	1.429	1.317	239	3.743	3.500	440	6.624	6.247
111	1.492	1.380	240	3.868	3.625	441	6.744	6.497
112	1.555	1.443	241	3.993	3.750	442	7.224	6.747
113	1.618	1.506	242	4.118	3.875	443	7.474	6.997
114	1.681	1.569	243	4.243	4.000	444	7.724	7.247
115	1.744	1.632	244	4.368	4.125	445	7.974	7.497
116	1.807	1.695	245	4.493	4.250	446	8.224	7.747
117	1.870	1.758	246	4.618	4.375	447	8.474	7.997
118	1.933	1.821	247	4.743	4.500	448	8.974	8.497
119	1.996	1.884	248	4.868	4.625	449	9.474	8.997
120	2.059	1.947	249	4.993	4.750	450	9.974	9.497
121	2.122	2.010	250	5.118	4.875	451	10.474	10.497
122	2.185	2.073	251	5.243	5.000	452	10.974	10.997
123	2.248	2.136	252	5.368	5.125	453	11.474	11.497
124	2.311	2.199	253	5.493	5.250	454	11.974	11.997
125	2.374	2.262	254	5.618	5.375	455	12.474	12.497
126	2.437	2.325	255	5.743	5.500	456	12.974	12.997
127	2.500	2.388	256	5.868	5.625	457	13.474	13.497
210	2.563	2.451	257	5.993	5.750	458	13.974	13.997
211	2.626	2.514	258	6.118	5.875	459	14.474	14.497
212	2.689	2.577	259	6.243	6.000	460	14.974	14.997
213	2.752	2.640	260	6.368	6.125		15.474	15.497
	2.815	2.703	261	6.493	6.250		15.974	15.997
	2.878	2.766	262	6.618	6.375			
	2.941	2.829	263	6.743	6.500			
	3.004	2.892	264	6.868	6.625			
	3.067	2.955	265	6.993	6.750			
	3.130	3.018	266	7.118	6.875			
	3.193	3.081	267	7.243	7.000			
	3.256	3.144	268	7.368	7.125			
	3.319	3.207	269	7.493	7.250			
	3.382	3.270	270	7.618	7.375			
	3.445	3.333	271	7.743	7.500			
	3.508	3.396	272	7.868	7.625			
	3.571	3.459	273	7.993	7.750			
	3.634	3.522	274	8.118	7.875			
	3.697	3.585	275	8.243	8.000			
	3.760	3.648	276	8.368	8.125			
	3.823	3.711	277	8.493	8.250			
	3.886	3.774	278	8.618	8.375			
	3.949	3.837	279	8.743	8.500			
	4.012	3.900	280	8.868	8.625			
	4.075	3.963	281	8.993	8.750			
	4.138	4.026	282	9.118	8.875			
	4.201	4.089	283	9.243	9.000			
	4.264	4.152	284	9.368	9.125			
	4.327	4.215	285	9.493	9.250			
	4.390	4.278	286	9.618	9.375			
	4.453	4.341	287	9.743	9.500			
	4.516	4.404	288	9.868	9.625			
	4.579	4.467	289	9.993	9.750			
	4.642	4.530	290	10.118	9.875			
	4.705	4.593	291	10.243	10.000			
	4.768	4.656	292	10.368	10.125			
	4.831	4.719	293	10.493	10.250			
	4.894	4.782	294	10.618	10.375			
	4.957	4.845	295	10.743	10.500			
	5.020	4.908	296	10.868	10.625			
	5.083	4.971	297	10.993	10.750			
	5.146	5.034	298	11.118	10.875			
	5.209	5.097	299	11.243	11.000			
	5.272	5.160	300	11.368	11.125			
	5.335	5.223	301	11.493	11.250			
	5.398	5.286	302	11.618	11.375			
	5.461	5.349	303	11.743	11.500			
	5.524	5.412	304	11.868	11.625			
	5.587	5.475	305	11.993	11.750			
	5.650	5.538	306	12.118	11.875			
	5.713	5.601	307	12.243	12.000			
	5.776	5.664	308	12.368	12.125			
	5.839	5.727	309	12.493	12.250			
	5.902	5.790	310	12.618	12.375			
	5.965	5.853	311	12.743	12.500			
	6.028	5.916	312	12.868	12.625			
	6.091	5.979	313	12.993	12.750			
	6.154	6.042	314	13.118	12.875			
	6.217	6.105	315	13.243	13.000			
	6.280	6.168	316	13.368	13.125			
	6.343	6.231	317	13.493	13.250			
	6.406	6.294	318	13.618	13.375			
	6.469	6.357	319	13.743	13.500			
	6.532	6.420	320	13.868	13.625			
	6.595	6.483	321	13.993	13.750			
	6.658	6.546	322	14.118	13.875			
	6.721	6.609	323	14.243	14.000			
	6.784	6.672	324	14.368	14.125			
	6.847	6.735	325	14.493	14.250			
	6.910	6.798	326	14.618	14.375			
	6.973	6.861	327	14.743	14.500			
	7.036	6.924	328	14.868	14.625			
	7.099	6.987	329	14.993	14.750			
	7.162	7.050	330	15.118	14.875			
	7.225	7.113	331	15.243	15.000			
	7.288	7.176	332	15.368	15.125			
	7.351	7.239	333	15.493	15.250			
	7.414	7.302	334	15.618	15.375			
	7.477	7.365	335	15.743	15.500			
	7.540	7.428	336	15.868	15.625			

Dash No.	A Dia.		B Dia.		Dash No.	A Dia.		B Dia.		Dash No.	A Dia.		B Dia.	
	+ .001	- .000	+ .000	- .001		+ .002	- .000	+ .000	- .002		+ .002	- .000	+ .000	- .002
006	.235	.123	2.493	2.315	334	2.995	2.623							
007	.266	.154	2.555	2.377	335	3.120	2.748							
008	.297	.185	2.618	2.440	336	3.245	2.873							
009	.329	.217	2.680	2.502	337	3.369	2.997							
010	.360	.248	2.743	2.565	338	3.494	3.122							
011	.422	.310	2.805	2.627	339	3.619	3.247							
012	.485	.373	2.868	2.690	340	3.744	3.372							
	+ .000	+ .000	2.930	2.752	341	3.869	3.497							
	- .002	- .002	2.993	2.815	342	3.994	3.622							
013	.550	.438	.991	.748	343	4.119	3.747							
014	.613	.501	1.053	.810	344	4.244	3.872							
015	.675	.563	1.116	.873	345	4.369	3.997							
016	.738	.626	1.178	.935	346	4.494	4.122							
017	.800	.688	1.241	.998	347	4.619	4.247							
018	.863	.751	1.303	1.060	348	4.744	4.372							
019	.925	.813	1.366	1.123	349	4.869	4.497							
020	.983	.881	1.428	1.185		+ .003	+ .000							
021	1.055	.943	1.491	1.248		- .000	- .003							
022	1.118	1.006	1.553	1.310	425	4.974	4.497							
023	1.180	1.068	1.616	1.373	426	5.099	4.622							
024	1.243	1.131	1.678	1.435	427	5.224	4.747							
025	1.305	1.193	1.741	1.498	428	5.349	4.872							
026	1.368	1.256	1.808	1.562	429	5.474	4.997							
027	1.430	1.318	1.893	1.625	430	5.599	5.122							
028	1.493	1.381	1.953	1.687	431	5.724	5.247							
110	.551	.373	2.243	2.000	432	5.849	5.372							
111	.613	.435	2.308	2.125	433	5.974	5.497							
112	.676	.498	2.493	2.250	434	6.099	5.622							
113	.738	.560	2.618	2.375	435	6.224	5.747							
114	.801	.623	2.743	2.500	436	6.349	5.872							
115	.863	.685	2.868	2.625	437	6.474	5.997							
116	.926	.748	2.993	2.750	438	6.624	6.247							
117	.993	.815	3.118	2.875	439	6.974	6.497							
118	1.056	.878	3.243	3.000	440	7.224	6.747							
119	1.118	.940	3.368	3.125	441	7.474	6.997							
120	1.181	1.003	3.493	3.250	442	7.724	7.247							
121	1.243	1.065	3.618	3.375	443	7.974	7.497							
122	1.306	1.128	3.743	3.500	444	8.224	7.747							
123	1.368	1.190	3.868	3.625	445	8.474	7.997							
124	1.431	1.253	3.993	3.750	446	8.974	8.497							
125	1.493	1.315	4.118	3.875	447	9.474	8.997							
126	1.558	1.380	4.243	4.000	448	9.974	9.497							
127	1.620	1.442	4.368	4.125	449	10.474	9.997							
128	1.683	1.505	4.493	4.250	450	10.974	10.497							
129	1.742	1.564	4.618	4.375	451	11.474	10.997							
130	1.805	1.627	4.743	4.500	452	11.974	11.497							
131	1.867	1.689	4.868	4.625	453	12.474	11.997							
132	1.930	1.752	4.993	4.750	454	12.974	12.497							
133	1.992	1.814	5.118	4.875	455	13.474	12.997							
134	2.055	1.877	5.243	5.000	456	13.974	13.497							
135	2.118	1.940	5.368	5.125	457	14.474	13.997							
136	2.180	2.002	5.493	5.250	458	14.974	14.497							
137	2.243	2.065	5.618	5.375	459	15.474	14.997							
138	2.305	2.127	5.743	5.500	460	15.974	15.497							
139	2.368	2.190	5.868	5.625										
140	2.430	2.252	5.993	5.750										



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
004-012	.094	.005-.015	.004
013-028	.094	.005-.015	.005
110-149	.141	.005-.015	.005
210-247	.281	.010-.025	.006
325-349	.281	.020-.030	.007
425-460	.375	.020-.030	.010

Notes:

- This part is supplied in virgin TFE. For other material callouts, refer to Technical Data section.
- Dash nos. correspond to those of AS 568.
- O-ring supplied on request. Size is same as seal size.
- Sidewall notches optional.
- This part also supplied with Minigrooves®; add "M" after basic part no. for Minigroove configuration.
- Dash nos. 006 thru 012, 110 thru 116, 210 thru 222 and 325 thru 349 conform to Boeing SCD BACR12BE.

Ordering Instructions

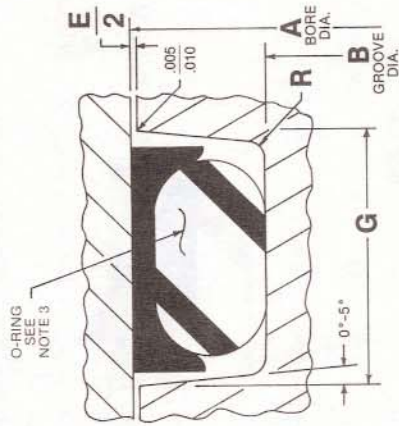
Ordering Instructions for Boeing Part Number BACR12BE (See Note 6)
 Example: BACR12BE-214-AorB
 Basic P/N _____
 Size Dash No. _____
 Material Code _____
 A-BMSB-121 Typ. 1, GR.B, CL. 1
 B-MIL-R-8791

Tetrafluor

PISTON SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) NO BACK-UP GLAND

TF 453

CODE IDENT. **07128**



Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
012	+ .001 - .001	+ .000 - .002	336	+ .002 - .000	+ .000 - .002	336	+ .002 - .000	+ .000 - .002
013	.485	.373	337	3.245	2.673	337	3.245	2.673
014	+ .002 - .000	+ .000 - .002	338	3.369	2.997	338	3.369	2.997
015	.550	.438	339	3.494	3.122	339	3.494	3.122
016	.613	.501	340	3.619	3.247	340	3.619	3.247
017	.675	.563	341	3.744	3.372	341	3.744	3.372
018	.738	.626	342	3.869	3.497	342	3.869	3.497
019	.800	.688	343	3.994	3.622	343	3.994	3.622
020	.863	.751	344	4.119	3.747	344	4.119	3.747
021	.925	.813	345	4.244	3.872	345	4.244	3.872
022	.988	.875	346	4.369	3.997	346	4.369	3.997
023	1.051	.937	347	4.494	4.122	347	4.494	4.122
024	1.114	1.000	348	4.619	4.247	348	4.619	4.247
025	1.177	1.062	349	4.744	4.372	349	4.744	4.372
026	1.240	1.124		4.869	4.497		4.869	4.497
027	1.303	1.186		+ .003 - .000	+ .000 - .003		+ .003 - .000	+ .000 - .003
028	1.366	1.248	425	4.974	4.622	425	4.974	4.622
110	1.429	1.310	426	5.099	4.747	426	5.099	4.747
111	1.492	1.372	427	5.224	4.872	427	5.224	4.872
112	1.555	1.434	428	5.349	4.997	428	5.349	4.997
113	1.618	1.496	429	5.474	5.122	429	5.474	5.122
114	1.681	1.558	430	5.599	5.247	430	5.599	5.247
115	1.744	1.620	431	5.724	5.372	431	5.724	5.372
116	1.807	1.682	432	5.849	5.497	432	5.849	5.497
117	1.870	1.744	433	5.974	5.622	433	5.974	5.622
118	1.933	1.806	434	6.099	5.747	434	6.099	5.747
119	1.996	1.868	435	6.224	5.872	435	6.224	5.872
120	2.059	1.930	436	6.349	5.997	436	6.349	5.997
121	2.122	2.000	437	6.474	6.122	437	6.474	6.122
122	2.185	2.062	438	6.599	6.247	438	6.599	6.247
123	2.248	2.124	439	6.724	6.372	439	6.724	6.372
124	2.311	2.186	440	6.849	6.497	440	6.849	6.497
125	2.374	2.248	441	6.974	6.622	441	6.974	6.622
126	2.437	2.310	442	7.099	6.747	442	7.099	6.747
127	2.500	2.372	443	7.224	6.872	443	7.224	6.872
128	2.563	2.434	444	7.349	7.000	444	7.349	7.000
129	2.626	2.496	445	7.474	7.125	445	7.474	7.125
130	2.689	2.558	446	7.599	7.250	446	7.599	7.250
131	2.752	2.620	447	7.724	7.375	447	7.724	7.375
132	2.815	2.682	448	7.849	7.500	448	7.849	7.500
133	2.878	2.744	449	7.974	7.625	449	7.974	7.625
134	2.941	2.806	450	8.099	7.750	450	8.099	7.750
135	3.004	2.868	451	8.224	7.875	451	8.224	7.875
136	3.067	2.930	452	8.349	8.000	452	8.349	8.000
137	3.130	2.992	453	8.474	8.125	453	8.474	8.125
138	3.193	3.054	454	8.599	8.250	454	8.599	8.250
139	3.256	3.116	455	8.724	8.375	455	8.724	8.375
140	3.319	3.178	456	8.849	8.500	456	8.849	8.500
141	3.382	3.240	457	8.974	8.625	457	8.974	8.625
142	3.445	3.302	458	9.099	8.750	458	9.099	8.750
143	3.508	3.364	459	9.224	8.875	459	9.224	8.875
144	3.571	3.426	460	9.349	9.000	460	9.349	9.000

Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.149	.005-.015	.004
013-028	.149	.005-.015	.005
110-149	.183	.005-.015	.005
210-247	.225	.010-.025	.006
325-349	.334	.020-.030	.007
425-460	.440	.020-.030	.010

Notes:

- This part is supplied in long wearing Tetralon® for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same as seal dash size.
- Suitable for use with MIL-P-83461 O-rings in MIL-H-83282 hydraulic fluid as well as with all standard hydraulic fluids and O-ring compounds.
- Sidewall notches optional.
- This part also supplied with Mini grooves®; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

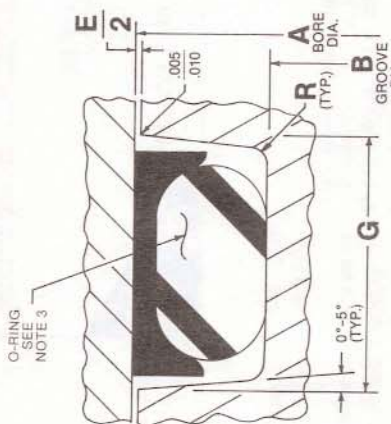


PISTON SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) ONE BACK-UP GLAND HEAVY DUTY SERVICE

CODE IDENT. **07128**

TF 877

Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
012	+ .001 - .000	+ .000 - .002	145	+ .002 - .000	+ .000 - .002	336	+ .002 - .000	+ .000 - .002
013	.485	.373	146	2.743	2.565	337	3.245	2.873
014	+ .000 - .002	+ .000 - .002	147	2.805	2.627	338	3.369	2.997
015	.550	.438	148	2.868	2.690	339	3.494	3.122
016	.613	.501	149	2.930	2.752	340	3.619	3.247
017	.675	.563	210	2.993	2.815	341	3.744	3.372
018	.738	.626	211	.991	.748	342	3.869	3.497
019	.800	.688	212	1.053	.810	343	3.994	3.622
020	.863	.751	213	1.116	.873	344	4.119	3.747
021	.925	.813	214	1.178	.935	345	4.244	3.872
022	.988	.875	215	1.241	.998	346	4.369	3.997
023	1.051	.938	216	1.303	1.060	347	4.494	4.122
024	1.114	1.006	217	1.366	1.123	348	4.619	4.247
025	1.177	1.068	218	1.428	1.185	349	4.744	4.372
026	1.240	1.131	219	1.491	1.248		4.869	4.497
027	1.303	1.193	220	1.553	1.310		+ .003 - .000	+ .000 - .003
028	1.366	1.256	221	1.616	1.373	425	4.974	4.497
110	1.430	1.318	222	1.678	1.435	426	5.099	4.622
111	1.493	1.381	223	1.741	1.498	427	5.224	4.747
112	.551	.373	224	1.803	1.561	428	5.349	4.872
113	.613	.435	225	1.866	1.625	429	5.474	4.997
114	.675	.498	226	1.929	1.687	430	5.599	5.122
115	.738	.560	227	1.992	1.749	431	5.724	5.247
116	.800	.622	228	2.055	1.811	432	5.849	5.372
117	.863	.684	229	2.118	1.873	433	5.974	5.497
118	.925	.746	230	2.181	1.935	434	6.099	5.622
119	.988	.808	231	2.244	2.000	435	6.224	5.747
120	1.051	.870	232	2.307	2.062	436	6.349	5.872
121	1.114	.932	233	2.370	2.125	437	6.474	5.997
122	1.177	.994	234	2.433	2.187	438	6.599	6.122
123	1.240	1.056	235	2.496	2.250	439	6.724	6.247
124	1.303	1.118	236	2.559	2.312	440	6.849	6.372
125	1.366	1.180	237	2.622	2.375	441	6.974	6.497
126	1.429	1.242	238	2.685	2.437	442	7.099	6.622
127	1.492	1.304	239	2.748	2.500	443	7.224	6.747
128	1.555	1.366	240	2.811	2.562	444	7.349	6.872
129	1.618	1.428	241	2.874	2.625	445	7.474	6.997
130	1.681	1.490	242	2.937	2.687	446	7.599	7.122
131	1.744	1.552	243	3.000	2.750	447	7.724	7.247
132	1.807	1.614	244	3.063	2.812	448	7.849	7.372
133	1.870	1.676	245	3.126	2.875	449	7.974	7.497
134	1.933	1.738	246	3.189	2.937	450	8.099	7.622
135	1.996	1.800	247	3.252	3.000	451	8.224	7.747
136	2.059	1.862	248	3.315	3.062	452	8.349	7.872
137	2.122	1.924	249	3.378	3.125	453	8.474	7.997
138	2.185	1.986	250	3.441	3.187	454	8.599	8.122
139	2.248	2.048	251	3.504	3.250	455	8.724	8.247
140	2.311	2.110	252	3.567	3.312	456	8.849	8.372
141	2.374	2.172	253	3.630	3.375	457	8.974	8.497
142	2.437	2.234	254	3.693	3.437	458	9.099	8.622
143	2.500	2.296	255	3.756	3.500	459	9.224	8.747
144	2.563	2.358	256	3.819	3.562	460	9.349	8.872



Dash No.	G Groove Width + .010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.149	.005-.015	.004
013-028	.149	.005-.015	.005
110-149	.183	.005-.015	.005
210-247	.225	.010-.025	.006
325-349	.334	.020-.030	.007
425-460	.440	.020-.030	.010

Notes:

- This part is supplied in long wearing "Tetralon" for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same as seal dash size.
- Sidewall notches optional.
- This part also supplied with Mini grooves; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

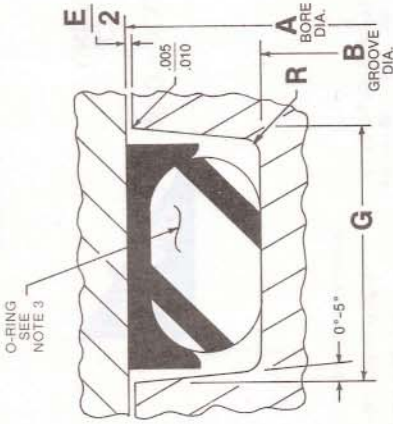
Tetralon

PISTON SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) ONE BACK-UP GLAND

CODE IDENT. **07128**

TF 403

Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.	Dash No.	A Dia.	B Dia.
012	+ .001 - .000	+ .000 - .001	145	+ .002 - .000	+ .000 - .002	336	+ .002 - .000	+ .000 - .002
013	.485	.373	146	2.743	2.565	337	3.245	2.877
014	+ .002 - .000	+ .000 - .002	147	2.805	2.627	338	3.369	2.997
015	.550	.438	148	2.868	2.690	339	3.494	3.122
016	.613	.501	149	2.930	2.752	340	3.619	3.247
017	.675	.563	210	2.993	2.815	341	3.744	3.372
018	.738	.626	211	.991	.748	342	3.869	3.497
019	.800	.688	212	1.053	.810	343	3.994	3.622
020	.863	.751	213	1.116	.873	344	4.119	3.747
021	.925	.813	214	1.178	.935	345	4.244	3.872
022	.988	.875	215	1.241	.998	346	4.369	3.997
023	1.051	.938	216	1.303	1.060	347	4.494	4.122
024	1.114	1.006	217	1.366	1.123	348	4.619	4.247
025	1.177	1.068	218	1.428	1.185	349	4.744	4.372
026	1.240	1.131	219	1.491	1.248		4.869	4.497
027	1.303	1.193	220	1.553	1.310		+ .003 - .000	+ .000 - .003
028	1.366	1.256	221	1.616	1.373	425	4.974	4.497
110	1.429	1.318	222	1.678	1.435	426	5.099	4.622
111	1.492	1.381	223	1.741	1.498	427	5.224	4.747
112	1.555	1.444	224	1.803	1.561	428	5.349	4.872
113	1.618	1.507	225	1.866	1.624	429	5.474	4.997
114	1.681	1.570	226	1.929	1.687	430	5.599	5.122
115	1.744	1.633	227	2.000	1.750	431	5.724	5.247
116	1.807	1.696	228	2.063	1.813	432	5.849	5.372
117	1.870	1.759	229	2.126	1.876	433	5.974	5.497
118	1.933	1.822	230	2.189	1.939	434	6.099	5.622
119	1.996	1.885	231	2.252	2.002	435	6.224	5.747
120	2.059	1.948	232	2.315	2.065	436	6.349	5.872
121	2.122	2.011	233	2.378	2.128	437	6.474	5.997
122	2.185	2.074	234	2.441	2.191	438	6.599	6.122
123	2.248	2.137	235	2.504	2.254	439	6.724	6.247
124	2.311	2.200	236	2.567	2.317	440	6.849	6.372
125	2.374	2.263	237	2.630	2.380	441	6.974	6.497
126	2.437	2.326	238	2.693	2.443	442	7.099	6.622
127	2.500	2.389	239	2.756	2.506	443	7.224	6.747
128	2.563	2.452	240	2.819	2.569	444	7.349	6.872
129	2.626	2.515	241	2.882	2.632	445	7.474	6.997
130	2.689	2.578	242	2.945	2.695	446	7.599	7.122
131	2.752	2.641	243	3.008	2.758	447	7.724	7.247
132	2.815	2.704	244	3.071	2.821	448	7.849	7.372
133	2.878	2.767	245	3.134	2.884	449	7.974	7.497
134	2.941	2.830	246	3.197	2.947	450	8.099	7.622
135	3.004	2.893	247	3.260	2.998	451	8.224	7.747
136	3.067	2.956	248	3.323	3.061	452	8.349	7.872
137	3.130	3.019	249	3.386	3.124	453	8.474	7.997
138	3.193	3.082	250	3.449	3.187	454	8.599	8.122
139	3.256	3.145	251	3.512	3.250	455	8.724	8.247
140	3.319	3.208	252	3.575	3.313	456	8.849	8.372
141	3.382	3.271	253	3.638	3.376	457	8.974	8.497
142	3.445	3.334	254	3.701	3.439	458	9.099	8.622
143	3.508	3.397	255	3.764	3.502	459	9.224	8.747
144	3.571	3.460	256	3.827	3.565	460	9.349	8.872



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.207	.005-.015	.004
013-028	.207	.005-.015	.005
110-149	.245	.005-.015	.005
210-247	.304	.010-.025	.006
325-349	.424	.020-.030	.007
425-460	.579	.020-.030	.010

Notes:

- This part is supplied in long wearing Tetralon® for other material callouts refer to Technical Data section.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same as seal dash size.
- Suitable for use with MIL-P-83461 O-rings in MIL-H-83282 hydraulic fluid as well as with all standard hydraulic fluids and O-ring compounds.
- Sidewall notches optional.
- This part also supplied with Mini grooves®; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

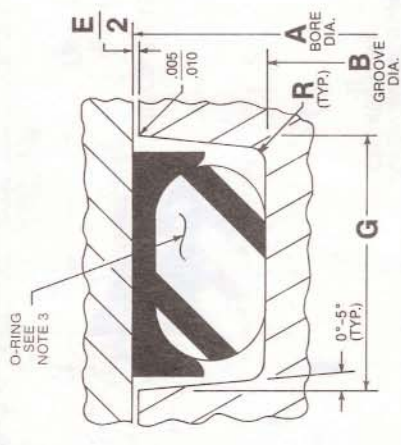


PISTON SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) TWO BACK-UP GLAND HEAVY DUTY SERVICE

CODE IDENT.	07128
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TF 935

Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001	- .001		+ .000	- .002		+ .002	- .000		+ .000	- .002
004	.190	.076	214	1.241	.998	340	3.744	3.372			
005	.221	.108	215	1.303	1.060	341	3.869	3.497			
006	.235	.123	216	1.366	1.123	342	3.994	3.622			
007	.266	.154	217	1.428	1.185	343	4.119	3.747			
008	.297	.185	218	1.491	1.248	344	4.244	3.872			
009	.329	.217	219	1.553	1.310	345	4.369	3.997			
010	.360	.248	220	1.616	1.373	346	4.494	4.122			
011	.422	.310	221	1.678	1.435	347	4.619	4.247			
012	.485	.373	222	1.741	1.498	348	4.744	4.372			
	+ .002	+ .000	223	1.868	1.625	349	4.869	4.497			
	- .002	- .002	224	1.993	1.750		+ .003	+ .003			
013	.550	.438	225	2.118	1.875		- .003	- .003			
014	.613	.501	226	2.243	2.000	425	4.974	4.497			
015	.675	.563	227	2.368	2.125	426	5.099	4.622			
016	.738	.626	228	2.493	2.250	427	5.224	4.747			
017	.800	.688	229	2.618	2.375	428	5.349	4.872			
018	.863	.751	230	2.743	2.500	429	5.474	4.997			
019	.925	.813	231	2.868	2.625	430	5.599	5.122			
020	.993	.881	232	2.993	2.750	431	5.724	5.247			
021	1.055	.943	233	3.118	2.875	432	5.849	5.372			
022	1.118	1.006	234	3.243	3.000	433	5.974	5.497			
023	1.180	1.068	235	3.368	3.125	434	6.099	5.622			
024	1.243	1.131	236	3.493	3.250	435	6.224	5.747			
025	1.305	1.193	237	3.618	3.375	436	6.349	5.872			
026	1.368	1.256	238	3.743	3.500	437	6.474	5.997			
027	1.430	1.318	239	3.868	3.625	438	6.724	6.247			
028	1.493	1.381	240	3.993	3.750	439	6.974	6.497			
110	.551	.373	241	4.118	3.875	440	7.224	6.747			
111	.613	.435	242	4.243	4.000	441	7.474	6.997			
112	.676	.498	243	4.368	4.125	442	7.724	7.247			
113	.738	.560	244	4.493	4.250	443	7.974	7.497			
114	.801	.623	245	4.618	4.375	444	8.224	7.747			
115	.863	.685	246	4.743	4.500	445	8.474	7.997			
116	.926	.748	247	4.868	4.625	446	8.724	8.247			
117	.993	.815	325	1.870	1.498	447	9.474	8.997			
118	1.056	.878	326	1.995	1.623	448	9.974	9.497			
119	1.118	.940	327	2.120	1.748	449	10.474	9.997			
120	1.181	1.003	328	2.245	1.873	450	10.974	10.497			
121	1.243	1.065	329	2.370	1.998	451	11.474	10.997			
122	1.306	1.128	330	2.495	2.123	452	11.974	11.497			
123	1.368	1.190	331	2.620	2.248	453	12.474	11.997			
124	1.431	1.253	332	2.745	2.373	454	12.974	12.497			
125	1.493	1.315	333	2.870	2.498	455	13.474	12.997			
126	1.556	1.380	334	2.995	2.623	456	13.974	13.497			
127	1.620	1.442	335	3.120	2.748	457	14.474	13.997			
210	.991	.748	336	3.245	2.873	458	14.974	14.497			
211	1.053	.810	337	3.369	2.997	459	15.474	14.997			
212	1.116	.873	338	3.494	3.122	460	15.974	15.497			
213	1.178	.935	339	3.619	3.247						



Dash No.	G Groove Width +.010 - .000	R Groove Radius	E Diametral Clearance Max.
012	.207	.005-.015	.004
013-028	.207	.005-.015	.005
110-149	.245	.005-.015	.005
210-247	.304	.010-.025	.006
325-349	.424	.020-.030	.007
425-460	.579	.020-.030	.010

Notes:

- This part is supplied in long wearing 4. Sidewall notches optional. "Tetraion"; for other material callouts 5. This part also supplied with Mini grooves, add "M" after basic part no. for Minigroove configuration.
- Dash numbers correspond to AS568.
- O-ring supplied on request. Size is same 6. Dash nos. 004 thru 012, 110 thru 116, 210 thru 222 and 325 thru 349 conform to Boeing SCD BACR12BF. These parts are 15% graphite filled TFE.

Ordering Instructions

Ordering Instructions for
Boeing Part Number
BACR12BF
Example: BACR12BF-214A
Basic P/N
Size Dash No.
Material Code
(15% Graphite filled TFE)

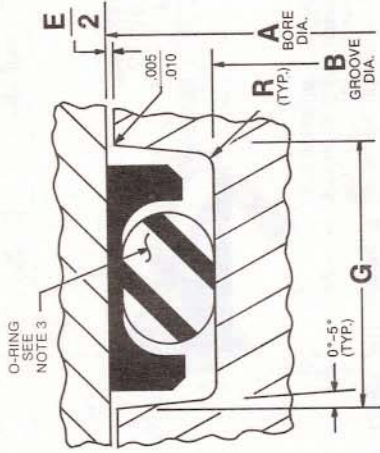


**PISTON SEAL INSTALLATION
FOR MIL-P-5514
(C, D & E REVISIONS)
TWO BACK-UP GLAND**

CODE IDENT.

07128

TF 429



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		B Dia.	
	+ .001 - .000	+ .000 - .001		+ .002 - .000	+ .000 - .002		+ .002 - .000	+ .000 - .002	+ .002 - .000	+ .000 - .002
004	.190	.076	214	1.241	.998	340	3.744	+ .002	+ .002	
005	.221	.108	215	1.303	1.060	341	3.869	- .000	- .002	
006	.235	.123	216	1.366	1.123	342	3.994	3.744	3.372	
007	.266	.154	217	1.428	1.185	343	4.119	3.869	3.497	
008	.297	.185	218	1.491	1.248	344	4.244	3.994	3.622	
009	.329	.217	219	1.553	1.310	345	4.369	4.119	3.747	
010	.360	.248	220	1.616	1.373	346	4.494	4.244	3.872	
011	.422	.310	221	1.678	1.435	347	4.619	4.369	3.997	
012	.485	.373	222	1.741	1.498	348	4.744	4.494	4.122	
	+ .002 - .000	+ .000 - .002	223	1.868	1.625	349	4.869	4.619	4.247	
			224	1.993	1.750		+ .003 - .003	4.744	4.372	
013	.550	.438	225	2.118	1.875		4.869	4.497	4.497	
014	.613	.501	226	2.243	2.000	425	4.974	5.099	4.622	
015	.675	.563	227	2.368	2.125	426	5.099	5.224	4.747	
016	.738	.626	228	2.493	2.250	427	5.224	5.349	4.872	
017	.800	.688	229	2.618	2.375	428	5.349	5.474	4.997	
018	.863	.751	230	2.743	2.500	429	5.474	5.599	5.122	
019	.925	.813	231	2.868	2.625	430	5.599	5.724	5.247	
020	.993	.881	232	2.993	2.750	431	5.724	5.849	5.372	
021	1.055	.943	233	3.118	2.875	432	5.849	5.974	5.497	
022	1.118	1.006	234	3.243	3.000	433	5.974	6.099	5.622	
023	1.180	1.068	235	3.368	3.125	434	6.099	6.224	5.747	
024	1.243	1.131	236	3.493	3.250	435	6.224	6.349	5.872	
025	1.305	1.193	237	3.618	3.375	436	6.349	6.474	5.997	
026	1.368	1.256	238	3.743	3.500	437	6.474	6.599	6.122	
027	1.430	1.318	239	3.868	3.625	438	6.599	6.724	6.247	
028	1.493	1.381	240	3.993	3.750	439	6.724	6.849	6.372	
110	.551	.373	241	4.118	3.875	440	7.224	7.474	6.997	
111	.613	.435	242	4.243	4.000	441	7.474	7.724	7.247	
112	.676	.498	243	4.368	4.125	442	7.724	7.974	7.497	
113	.738	.560	244	4.493	4.250	443	7.974	8.224	7.747	
114	.801	.623	245	4.618	4.375	444	8.224	8.474	7.997	
115	.863	.685	246	4.743	4.500	445	8.474	8.724	8.247	
116	.926	.748	247	4.868	4.625	446	8.724	8.974	8.497	
117	.989	.811	325	4.993	4.750	447	8.974	9.224	8.747	
118	1.056	.878	326	5.118	4.875	448	9.224	9.474	8.997	
119	1.118	.940	327	5.243	5.000	449	9.474	9.724	9.247	
120	1.181	1.003	328	5.368	5.125	450	9.724	9.974	9.497	
121	1.243	1.065	329	5.493	5.250	451	9.974	10.224	9.747	
122	1.306	1.128	330	5.618	5.375	452	10.224	10.474	9.997	
123	1.368	1.190	331	5.743	5.500	453	10.474	10.724	10.247	
124	1.431	1.253	332	5.868	5.625	454	10.724	10.974	10.497	
125	1.493	1.315	333	5.993	5.750	455	10.974	11.224	10.747	
126	1.556	1.378	334	6.118	5.875	456	11.224	11.474	10.997	
127	1.620	1.442	335	6.243	6.000	457	11.474	11.724	11.247	
210	.991	.748	336	6.368	6.125	458	11.724	11.974	11.497	
211	1.053	.810	337	6.493	6.250	459	11.974	12.224	11.747	
212	1.116	.873	338	6.618	6.375	460	12.224	12.474	11.997	
213	1.178	.935	339	6.743	6.500		12.474	12.724	12.247	

Dash No.	G Groove Width + .010 - .000	R Groove Radius	E Diametral Clearance Max.
004-012	.207	.005-.015	.004
013-028	.207	.005-.015	.005
110-127	.245	.005-.015	.005
210-247	.304	.010-.025	.006
325-349	.424	.020-.030	.007
425-460	.579	.020-.030	.010

- Notes:**
1. This part is supplied in virgin TFE. For other material callouts, refer to Technical Data section.
 2. Dash nos. correspond to those of AS 568.
 3. O-ring supplied on request. Size is same as seal size.
 4. Parts supplied with sidewall notches.
 5. This part also supplied with Minigrooves[®]; add "M" after basic part no. for Minigroove configuration.
 6. Dash nos. 008 thru 012, 110 thru 116, 210 thru 222 and 325 thru 349 conform to Boeing SCD BACR12BH.

Ordering Instructions

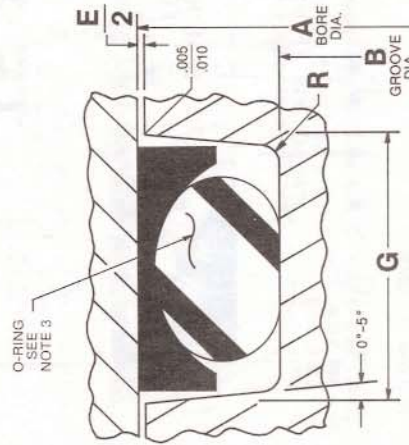
Ordering Instructions for Boeing Part Number BACR12BH (See Note 6)
 Example: BACR12BH-214-AorB
 Basic P/N _____
 Size Dash No. _____
 Material Code _____
 A-BMS8-121 Typ. 1, GR.B, CL. 1
 B-MIL-R-8791



PISTON SEAL INSTALLATION FOR MIL-P-5514 (C, D & E REVISIONS) TWO BACK-UP GLAND

CODE IDENT.
07128

TF 454



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001	- .001		+ .002	- .000		+ .001	- .001		+ .002	- .000
1	.250	.281	31	2.251	2.376	60	6.003	5.524	60	6.003	5.524
2	.281	.312	32	2.376	2.501	61	6.128	5.649	61	6.128	5.649
3	.312	.344	33	2.501	2.626	62	6.253	5.774	62	6.253	5.774
4	.344	.375	34	2.626	2.751	63	6.378	5.899	63	6.378	5.899
5	.375	.406	35	2.751	2.876	64	6.503	6.024	64	6.503	6.024
6	.406	.437	36	2.876	3.001	65	6.628	6.145	65	6.628	6.145
7	.437	.468	37	3.001	3.126	66	6.753	6.266	66	6.753	6.266
8	.468	.500	38	3.126	3.251	67	6.878	6.387	67	6.878	6.387
9	.500	.531	39	3.251	3.376	68	7.003	6.508	68	7.003	6.508
10	.531	.562	40	3.376	3.501	69	7.128	6.629	69	7.128	6.629
11	.562	.593	41	3.501	3.626	70	7.253	6.750	70	7.253	6.750
12	.593	.624	42	3.626	3.751	71	7.378	6.871	71	7.378	6.871
13	.624	.655	43	3.751	3.876	72	7.503	6.992	72	7.503	6.992
14	.655	.686	44	3.876	4.001	73	7.628	7.113	73	7.628	7.113
15	.686	.717	45	4.001	4.126	74	7.753	7.234	74	7.753	7.234
16	.717	.748	46	4.126	4.251	75	7.878	7.355	75	7.878	7.355
17	.748	.779	47	4.251	4.376	76	8.003	7.476	76	8.003	7.476
18	.779	.810	48	4.376	4.501	77	8.128	7.597	77	8.128	7.597
19	.810	.841	49	4.501	4.626	78	8.253	7.718	78	8.253	7.718
20	.841	.872	50	4.626	4.751	79	8.378	7.839	79	8.378	7.839
21	.872	.903	51	4.751	4.876	80	8.503	7.960	80	8.503	7.960
22	.903	.934	52	4.876	5.001	81	8.628	8.081	81	8.628	8.081
23	.934	.965	53	5.001	5.126	82	8.753	8.202	82	8.753	8.202
24	.965	.996	54	5.126	5.251	83	8.878	8.323	83	8.878	8.323
25	.996	1.027	55	5.251	5.376	84	9.003	8.444	84	9.003	8.444
26	1.027	1.058	56	5.376	5.501	85	9.128	8.565	85	9.128	8.565
27	1.058	1.089	57	5.501	5.626	86	9.253	8.686	86	9.253	8.686
28	1.089	1.120	58	5.626	5.751	87	9.378	8.807	87	9.378	8.807
29	1.120	1.151	59	5.751	5.876	88	9.503	8.928	88	9.503	8.928
30	1.151	1.182	326	5.876	6.001	327	10.003	9.049	326	10.003	9.049
31	1.182	1.213	327	6.001	6.126	328	10.128	9.170	327	10.128	9.170

Dash No.	G Groove Width +.005 - .000	R Groove Radius	E Diametral Clearance Max.
006-012	.138	.005-.015	.005
110-116	.171	.005-.015	.005
210-222	.208	.010-.025	.006
325-349	.311	.020-.035	.007
425-429	.408	.020-.035	.008
430-460	.408	.020-.035	.010

Notes:

- This part is supplied in long wearing "Tetraon"; for other material callouts refer to Technical Data section.
- AS 568, Dash nos. of "AN" series O-rings are shown for cross reference only.
- Sidewall notches optional.
- This part also supplied with Mini-grooves; add "M" after basic part no. for Minigroove configuration.

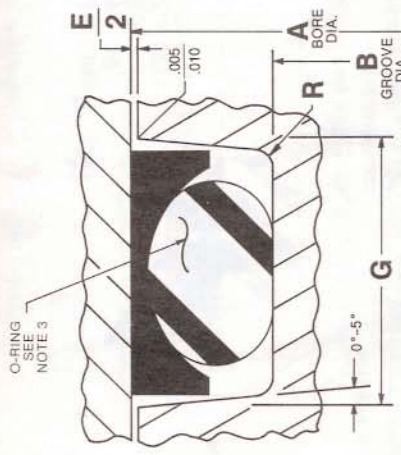


Ordering Instructions

PISTON SEAL INSTALLATION FOR MIL-P-5514 (A & B REVISIONS) ONE BACK-UP GLAND

CODE IDENT.
07128

TF 395



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 -.001	.5625 .625 .6875		+ .002 -.000	.3935 .446 .5085		+ .001 -.001	.571 .6335 .696 .7585		+ .002 -.000	.3935 .446 .5085
AN6227 SERIES	8		AN6227 SERIES	20		AN6227 SERIES	20		AN6227 SERIES	54	
AN6230 SERIES	9		AN6230 SERIES	21		AN6230 SERIES	21		AN6230 SERIES	55	
AS568 SERIES	10		AS568 SERIES	22		AS568 SERIES	22		AS568 SERIES	56	
	11			23			23			57	
	12			24			24			58	
	13			25			25			59	
	14			26			26			60	
	15			27			27			61	
	16			28			28			62	
	17			29			29			63	
	18			30			30			64	
	19			31			31			65	
	20			32			32			66	
	21			33			33			67	
	22			34			34			68	
	23			35			35			69	
	24			36			36			70	
	25			37			37			71	
	26			38			38			72	
	27			39			39			73	
	1			40			40			74	
	2			41			41			75	
	3			42			42			76	
	4			43			43			77	
	5			44			44			78	
	6			45			45			79	
	7			46			46			80	
	8			47			47			81	
	9			48			48			82	
	10			49			49			83	
	11			50			50			84	
	12			51			51			85	
	13			52			52			86	
	14			53			53			87	
	15										
	16										

Dash No.	G Groove Width +.005 — .000	R Groove Radius	E Diametral Clearance Max.
110-116	.238	.005-.015	.005
210-247	.275	.010-.025	.006
325-349	.410	.020-.035	.007
425-429	.538	.020-.035	.008
430-460	.538	.020-.035	.010

Notes:

- This part supplied in long wearing Tetralon® for other material callouts refer to Technical Data section.
- Dash nos. correspond to dash nos. of AS 568. Dash nos. of "AN" series O-rings are shown for cross reference only.
-
- Gland dimensions for AS dash no's 223 thru 247 permit dynamic applications using o-rings normally restricted to static seals.
- Sidewall notches optional.
- This part also supplied with Mini-grooves™; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions

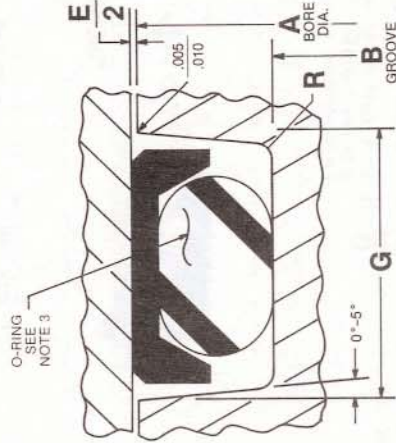


**PISTON SEAL INSTALLATION
FOR MIL-P-5514
(A & B REVISIONS)
TWO BACK-UP GLAND**

CODE IDENT.

07128

TF 405



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 - .000	+ .000 - .001		+ .002 - .000	+ .000 - .002		+ .002 - .000	+ .000 - .002		+ .002 - .000	+ .000 - .002
006	.250	.119	126	1.562	1.366	230	2.750	2.487	331	2.625	2.230
007	.281	.150	127	1.625	1.429	231	2.875	2.612	332	2.750	2.355
008	.312	.181	128	1.687	1.491	232	3.000	2.737	333	2.875	2.480
009	.343	.213	129	1.750	1.554	233	3.125	2.862	334	3.000	2.605
010	.375	.244	130	1.812	1.616	234	3.250	2.987	335	3.125	2.730
011	.437	.306	131	1.875	1.679	235	3.375	3.112	336	3.250	2.855
012	.500	.369	132	1.937	1.741	236	3.500	3.237	337	3.375	2.980
	+ .002 - .000	+ .000 - .002	133	2.000	1.804	237	3.625	3.362	338	3.500	3.105
013	.562	.431	134	2.062	1.866	238	3.750	3.487	339	3.625	3.230
014	.625	.494	135	2.125	1.929	239	3.875	3.612	340	3.750	3.355
015	.687	.556	136	2.187	1.991	240	4.000	3.737	341	3.875	3.480
016	.750	.619	137	2.250	2.054	241	4.125	3.862	342	4.000	3.605
017	.812	.681	138	2.312	2.116	242	4.250	3.987	343	4.125	3.730
018	.875	.744	139	2.375	2.179	243	4.375	4.112	344	4.250	3.855
019	.937	.806	140	2.437	2.241	244	4.500	4.237	345	4.375	3.980
020	1.000	.869	141	2.500	2.304	245	4.625	4.362	346	4.500	4.105
021	1.062	.931	142	2.562	2.366	246	4.750	4.487	347	4.625	4.230
022	1.125	.994	143	2.625	2.429	247	4.875	4.612	348	4.750	4.355
023	1.187	1.056	144	2.687	2.491	248	5.000	4.737	349	4.875	4.480
024	1.250	1.119	145	2.750	2.554	249	5.125	4.862		+ .003 - .000	+ .000 - .003
025	1.312	1.181	146	2.812	2.616	250	5.250	4.987		5.000	4.485
026	1.375	1.244	147	2.875	2.679	251	5.375	5.112	425	5.000	4.610
027	1.437	1.306	148	2.937	2.741	252	5.500	5.237	426	5.125	4.735
028	1.500	1.369	149	3.000	2.804	253	5.625	5.362	427	5.250	4.860
029	1.562	1.431	150	3.062	2.866	254	5.750	5.487	428	5.375	4.985
030	1.625	1.494	151	3.125	2.929	255	5.875	5.612	429	5.500	5.110
031	1.687	1.556	152	3.187	3.000	256	6.000	5.737	430	5.625	5.235
032	1.750	1.619	153	3.250	3.062	257	6.125	5.862	431	5.750	5.360
033	1.812	1.681	154	3.312	3.125	258	6.250	5.987	432	5.875	5.485
034	1.875	1.744	155	3.375	3.187	259	6.375	6.112	433	6.000	5.610
035	1.937	1.806	156	3.437	3.250	260	6.500	6.237	434	6.125	5.735
036	2.000	1.869	157	3.500	3.312	261	6.625	6.362	435	6.250	5.860
037	2.062	1.931	158	3.562	3.375	262	6.750	6.487	436	6.375	5.985
038	2.125	1.994	159	3.625	3.437	263	6.875	6.612	437	6.500	6.110
039	2.187	2.056	160	3.687	3.500	264	7.000	6.737	438	6.625	6.235
040	2.250	2.119	161	3.750	3.562	265	7.125	6.862	439	6.750	6.360
041	2.312	2.181	162	3.812	3.625	266	7.250	6.987	440	6.875	6.485
042	2.375	2.244	163	3.875	3.687	267	7.375	7.112	441	7.000	6.610
043	2.437	2.306	164	3.937	3.750	268	7.500	7.237	442	7.125	6.735
044	2.500	2.369	165	4.000	3.812	269	7.625	7.362	443	7.250	6.860
045	2.562	2.431	166	4.062	3.875	270	7.750	7.487	444	7.375	6.985
110	.562	.429	210	1.000	.737	268	8.000	7.612	445	7.500	7.110
111	.625	.491	211	1.062	.799	269	8.125	7.737	446	7.625	7.235
112	.687	.554	212	1.125	.862	270	8.250	7.862	447	7.750	7.360
113	.750	.617	213	1.187	.924	271	8.375	7.987	448	7.875	7.485
114	.812	.679	214	1.250	.987	272	8.500	8.112	449	8.000	7.610
115	.875	.741	215	1.312	1.049	273	8.625	8.237	450	8.125	7.735
116	.937	.804	216	1.375	1.112	274	8.750	8.362	451	8.250	7.860
117	1.000	.866	217	1.437	1.174	275	8.875	8.487	452	8.375	7.985
118	1.062	.929	218	1.500	1.237	276	9.000	8.612	453	8.500	8.110
119	1.125	.991	219	1.562	1.299	277	9.125	8.737	454	8.625	8.235
120	1.187	.954	220	1.625	1.362	278	9.250	8.862	455	8.750	8.360
121	1.250	1.016	221	1.687	1.424	279	9.375	8.987	456	8.875	8.485
122	1.312	1.079	222	1.750	1.487	280	9.500	9.112	457	9.000	8.610
123	1.375	1.141	223	1.812	1.550	281	9.625	9.237	458	9.125	8.735
124	1.437	1.204	224	1.875	1.612	282	9.750	9.362	459	9.250	8.860
125	1.500	1.266	225	1.937	1.674	283	9.875	9.487	460	9.375	8.985
			226	2.000	1.737	325	1.875	1.480		9.500	9.110
			227	2.062	1.799	326	2.000	1.605		9.625	9.235
			228	2.125	1.862	327	2.125	1.730		9.750	9.360
			229	2.187	1.924	328	2.250	1.855		9.875	9.485
			230	2.250	1.987	329	2.375	1.980		10.000	9.610
			330	2.312	2.049	330	2.500	2.105		10.125	9.735

Dash No.	G Groove Width + .010 - .000	R Groove Radius	E Diametral Clearance Max.
006-044	.094	.005-.015	.004
110-163	.141	.005-.015	.005
210-281	.188	.010-.020	.006
325-349	.281	.020-.030	.007
425-460	.375	.020-.030	.008

Notes

- This part is supplied in molybdenum disul- 4. Bore diameters are in accordance with phide filled TFE. For other material callouts, standard industrial practice. refer to Technical Data section.
- Dash numbers correspond to AS 568.
- O-ring size is same as seal size.
- This part also supplied with Minigrooves®; add "M" after basic part no. for Minigroove configuration.
- Sidewall notches optional.

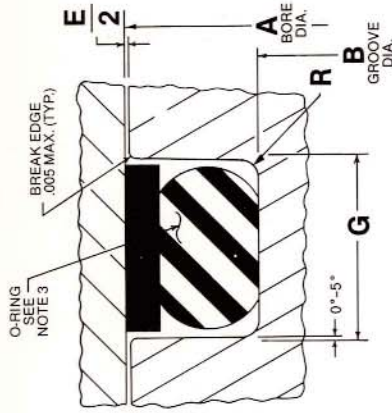
Ordering Instructions

Teflon

**PISTON SEAL INSTALLATION
FOR STANDARD BORE
SPECIAL GROOVE
NO BACK-UP GLAND
INDUSTRIAL SERVICE**

TF 731

CODE IDENT. **07128**



Dash No.	A Dia.		Dash No.	B Dia.		Dash No.	A Dia.		Dash No.	B Dia.	
	+ .001 - .000	+ .000 - .001		+ .003 - .000	+ .000 - .003		+ .005 - .000	+ .000 - .005			
007	.281	.139	141	2.500	2.263	332	2.750	2.259			
008	.312	.169	142	2.562	2.326	333	2.875	2.384			
009	.344	.200	143	2.625	2.388	334	3.000	2.509			
010	.375	.231	144	2.687	2.451	335	3.125	2.634			
011	.437	.263	145	2.750	2.513	336	3.250	2.759			
012	.500	.325	146	2.812	2.576	337	3.375	2.884			
	+ .002	+ .000	147	2.875	2.638	338	3.500	3.009			
	- .000	- .002	148	2.937	2.701	339	3.625	3.134			
013	.562	.388	149	3.000	2.763	340	3.750	3.259			
014	.625	.452		+ .004	+ .000	341	3.875	3.384			
015	.687	.515		- .000	- .004	342	4.000	3.509			
016	.750	.577	211	1.062	.762	343	4.125	3.634			
017	.812	.640	212	1.125	.824	344	4.250	3.759			
018	.875	.702	213	1.188	.887	345	4.375	3.884			
019	.937	.765	214	1.250	.950	346	4.500	4.009			
020	1.000	.827	215	1.312	1.012	347	4.625	4.134			
021	1.062	.890	216	1.375	1.074	348	4.750	4.259			
022	1.125	.952	217	1.437	1.137	349	4.875	4.384			
023	1.188	1.015	218	1.500	1.199		+ .006	+ .000			
024	1.250	1.078	219	1.562	1.262		- .000	- .006			
025	1.312	1.140	220	1.625	1.324	426	5.125	4.532			
026	1.375	1.202	221	1.688	1.387	427	5.250	4.657			
027	1.437	1.265	222	1.750	1.450	428	5.375	4.782			
028	1.500	1.327	223	1.875	1.512	429	5.500	4.907			
	+ .003	+ .000	224	2.000	1.637	430	5.625	5.032			
	- .000	- .003	225	2.125	1.762	431	5.750	5.157			
111	.625	.388	226	2.250	1.887	432	5.875	5.282			
112	.687	.451	227	2.375	2.012	433	6.000	5.407			
113	.750	.513	228	2.500	2.137	434	6.125	5.532			
114	.812	.576	229	2.625	2.262	435	6.250	5.657			
115	.875	.638	230	2.750	2.387	436	6.375	5.782			
116	.937	.701	231	2.875	2.512	437	6.500	5.907			
117	1.000	.763	232	3.000	2.637	438	6.750	6.032			
118	1.062	.826	233	3.125	2.762	439	7.000	6.282			
119	1.125	.888	234	3.250	2.887	440	7.250	6.532			
120	1.188	.951	235	3.375	3.012	441	7.500	6.782			
121	1.250	1.013	236	3.500	3.137	442	7.750	7.032			
122	1.312	1.076	237	3.625	3.262	443	8.000	7.282			
123	1.375	1.138	238	3.750	3.387	444	8.250	7.532			
124	1.437	1.201	239	3.875	3.512	445	8.500	7.782			
125	1.500	1.263	240	4.000	3.637	446	9.000	8.032			
126	1.562	1.326	241	4.125	3.762	447	9.500	8.532			
127	1.625	1.388	242	4.250	3.887	448	10.000	9.032			
128	1.687	1.451	243	4.375	4.012	449	10.500	9.532			
129	1.750	1.513	244	4.500	4.137	450	11.000	10.032			
130	1.812	1.576	245	4.625	4.262	451	11.500	10.532			
131	1.875	1.638	246	4.750	4.387	452	12.000	11.032			
132	1.937	1.701	247	4.875	4.512	453	12.500	11.532			
133	2.000	1.763		+ .005	+ .000	454	13.000	12.032			
134	2.062	1.826		- .000	- .005	455	13.500	12.532			
135	2.125	1.888	326	2.000	1.509	456	14.000	13.032			
136	2.188	1.951	327	2.125	1.634	457	14.500	13.532			
137	2.250	2.013	328	2.250	1.759	458	15.000	14.032			
138	2.312	2.076	329	2.375	1.884	459	15.500	14.532			
139	2.375	2.138	330	2.500	2.009	460	16.000	15.032			
140	2.437	2.201	331	2.625	2.134						

Dash No.	G Groove Width +.005 - .000	R Groove Radius	E Diametral Clearance Max.
007-028	.079	.005-.015	.004
111-149	.112	.005-.015	.005
211-247	.149	.010-.025	.006
326-349	.221	.020-.035	.007
426-460	.297	.020-.035	.008

- Notes:**
- This part is supplied in long wearing Tetralon® For other material callouts, refer to Technical Data section.
 - Dash nos. correspond to those of AS 568.
 - O-ring supplied on request. Size is one Dash NO. lower than seal size. For example, TF-487-214 uses 213 O-ring.
 - Bore diameter "A" per recommended industrial practice.
 - Sidewall notches optional.
 - This part also supplied with Mini-grooves®; add "M" after basic part no. for Minigroove configuration.

Ordering Instructions



**PISTON SEAL INSTALLATION
STANDARD BORE
SPECIAL GLAND
INDUSTRIAL SERVICE**

CODE IDENT.
07128

TF 487

COORSTEK
Amazing Solutions.

2051 East Maple Avenue
El Segundo, California 90245
U.S.A.

PHONE: (310) 322-8030
(800) 421-2054
FAX (310) 640-0312