FEDERAL SUPPLY CLASS
3120

RATIONALE

THIS DOCUMENT HAS BEEN UPDATED TO INCORPORATE A TYPE "A" PART NUMBER DESIGNATION FOR LINER SYSTEMS WITH THE SAME WEAR LIMITS BUT FOUR TIMES THE LIFE (100000 CYCLES) COMPARED TO STANDARD (25000 CYCLES) LINER SYSTEMS. TABULATED LOAD RATINGS. UPDATED FIGURES. CORRECTED BORE SIZE FOR M81934/1-18 FROM 1.2250 TO 1.1250. CLARIFIED RUNOUT REQUIREMENT BETWEEN ØB AND ØD. UPDATED PLATING REQUIREMENTS.
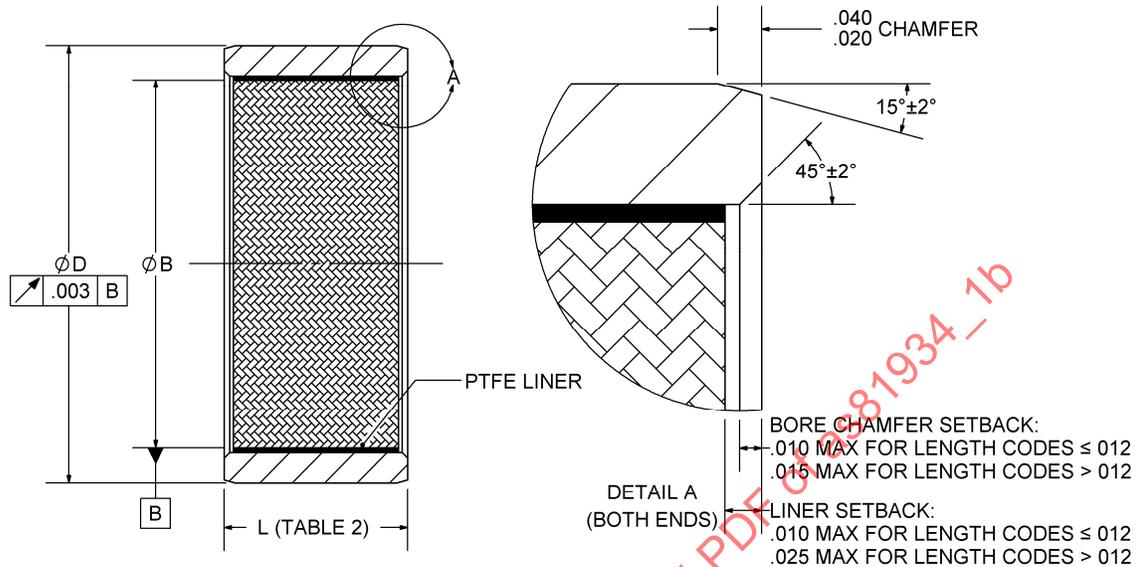
.040
.020 CHAMFER

15°±2°

45°±2°

ØD

ØB

.003 B

PTFE LINER

B

L (TABLE 2)

DETAIL A
(BOTH ENDS)

BORE CHAMFER SETBACK:
.010 MAX FOR LENGTH CODES ≤ 012
.015 MAX FOR LENGTH CODES > 012

LINER SETBACK:
.010 MAX FOR LENGTH CODES ≤ 012
.025 MAX FOR LENGTH CODES > 012

FIGURE 1 - PART CONFIGURATION

METAL CHAMFER

ME

METAL CHAMFER

LINER CHAMFER

LINER CHAMFER

LINER SETBACK
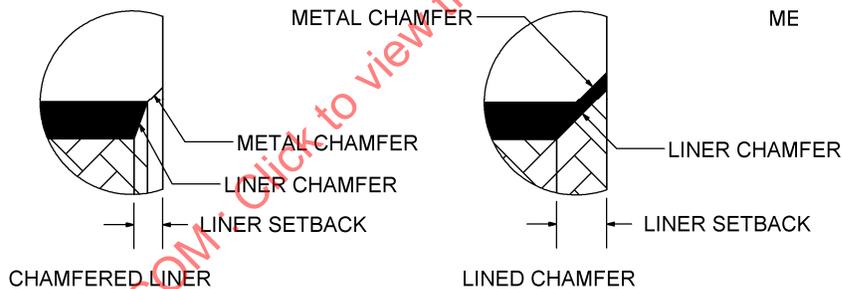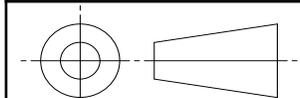
LINER SETBACK

CHAMFERED LINER

LINED CHAMFER

FIGURE 2 - EXAMPLES OF OTHER ACCEPTABLE LINER TRIMMING METHODS

LINER TRIMMING NOTES:

1/   SLEEVE LINER EDGES MAY BE TRIMMED STRAIGHT (FIGURE 1) OR CHAMFERED (FIGURE 2).

2/   LINERS MAY BE RECESSED UP TO THE MAX ALLOWED SETBACK DISTANCES (FIGURE 1) OR ADHERED TO THE METAL CHAMFERS (FIGURE 2, LINED CHAMFER).

3/   LINERS OR LOOSE LINER MATERIAL SHALL NOT EXTEND INTO THE METAL CHAMFER AREA UNLESS THAT LINER MATERIAL IS ADHERED TO THE METAL CHAMFER

For more information on this standard, visit
https://www.sae.org/standards/content/AS81934/1B/

THIRD ANGLE PROJECTION

ISSUED 1998-04   REVISED 2023-08

CUSTODIAN: SAE AIRFRAME CONTROL BEARINGS GROUP

PROCUREMENT SPECIFICATION: AS81934

AEROSPACE STANDARD

(R) BEARING, SLEEVE,
PLAIN, SELF-LUBRICATING,
-65 °F TO 325 °F

AS81934™/1
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TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC PART NO. 2/	NOMINAL SIZE	∅B (BORE DIA) +.0000 -.0010	∅D 1/	WEIGHT PER LENGTH (LB/IN) (REF) 3/	
				AL	CRES
M81934/1-04	.2500	.2515	.3760	.006	.016
M81934/1-05	.3125	.3140	.4386	.007	.019
M81934/1-06	.3750	.3765	.5012	.008	.022
M81934/1-07	.4375	.4390	.5638	.009	.025
M81934/1-08	.5000	.5015	.6265	.011	.028
M81934/1-09	.5625	.5640	.6892	.012	.031
M81934/1-10	.6250	.6265	.8142	.021	.056
M81934/1-11	.6875	.6890	.8767	.022	.060
M81934/1-12	.7500	.7515	.9393	.024	.065
M81934/1-14	.8750	.8765	1.0645	.028	.075
M81934/1-16	1.0000	1.0015	1.1898	.031	.084
M81934/1-18	1.1250	1.1265	1.3148	.035	.094
M81934/1-20	1.2500	1.2515	1.4398	.038	.103
M81934/1-22	1.3750	1.3765	1.5648	.041	.113
M81934/1-24	1.5000	1.5015	1.7523	.062	.171
M81934/1-26	1.6250	1.6265	1.8773	.067	.183
M81934/1-28	1.7500	1.7515	2.0023	.071	.196
M81934/1-32	2.0000	2.0015	2.2523	.081	.222

1/ ∅D TOLERANCE: ALUMINUM ±.0005; CORROSION RESISTANT STEEL +.0000, -.0005.

2/ FOR TYPE A BEARINGS, THE CORRESPONDING P/N WILL HAVE AN "A" DESIGNATION
AFTER THE BASIC P/N (E.G., M81934/1A-08C016).

3/ EXAMPLE OF WEIGHT CALCULATION: M81934/1-16A008 SLEEVE WEIGHT = (.031 LB/IN) X
.250 INCH = .008 POUND.

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TABLE 2 - BEARING SLEEVE LENGTH CODES

BORE SIZE CODE	NOMINAL SIZE	LENGTH L +.000/-.010									
		.156	.187	.218	.250	.281	.312	.343	.375	.437	.500
04	.2500	005	006	007	008	009	010	011	012	014	
05	.3125	005	006	007	008	009	010	011	012	014	016
06	.3750	005	006	007	008	009	010	011	012	014	016
07	.4375	005	006	007	008	009	010	011	012	014	016
08	.5000	005	006	007	008	009	010	011	012	014	016
09	.5625	005	006	007	008	009	010	011	012	014	016
10	.6250	005	006	007	008	009	010	011	012	014	016
11	.6875				008	009	010	011	012	014	016
12	.7500				008	009	010	011	012	014	016
14	.8750				008	009	010	011	012	014	016
16	1.0000				008	009	010	011	012	014	016
18	1.1250						010	011	012	014	016
20	1.2500								012	014	016
22	1.3750								012	014	016
24	1.5000								012	014	016
26	1.6250										016
28	1.7500										016
32	2.0000										016

BORE SIZE CODE	NOMINAL SIZE	LENGTH L +.000/-.010									
		.562	.625	.687	.750	.875	1.000	1.125	1.250	1.375	1.500
04	.2500										
05	.3125	018									
06	.3750	018	020	022							
07	.4375	018	020	022	024	028					
08	.5000	018	020	022	024	028					
09	.5625	018	020	022	024	028	032	036			
10	.6250	018	020	022	024	028	032	036	040	044	
11	.6875	018	020	022	024	028	032	036	040	044	048
12	.7500	018	020	022	024	028	032	036	040	044	048
14	.8750	018	020	022	024	028	032	036	040	044	048
16	1.0000	018	020	022	024	028	032	036	040	044	048
18	1.1250	018	020	022	024	028	032	036	040	044	048
20	1.2500	018	020	022	024	028	032	036	040	044	048
22	1.3750	018	020	022	024	028	032	036	040	044	048
24	1.5000	018	020	022	024	028	032	036	040	044	048
26	1.6250	018	020	022	024	028	032	036	040	044	048
28	1.7500	018	020	022	024	028	032	036	040	044	048
32	2.0000	018	020	022	024	028	032	036	040	044	048

BORE SIZE CODE	NOMINAL SIZE	LENGTH L +.000/-.010									
		1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500	2.750	3.000
04	.2500										
05	.3125										
06	.3750										
07	.4375										
08	.5000										
09	.5625										
10	.6250										
11	.6875	052									
12	.7500	052									
14	.8750	052									
16	1.0000	052	056	060							
18	1.1250	052	056	060							
20	1.2500	052	056	060	064	068					
22	1.3750	052	056	060	064	068					
24	1.5000	052	056	060	064	068	072	076	080	088	
26	1.6250	052	056	060	064	068	072	076	080	088	096
28	1.7500	052	056	060	064	068	072	076	080	088	096
32	2.0000	052	056	060	064	068	072	076	080	088	096

AEROSPACE STANDARD
(R) BEARING, SLEEVE,
PLAIN, SELF-LUBRICATING,
-65 °F TO 325 °F

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SAE INTERNATIONAL®

TABLE 3 - ALUMINUM BEARINGS LIMIT LOAD RATINGS (LBF) 1/

BORE CODE	LENGTH CODE									
	005	006	007	008	009	010	011	012	014	016
04	704	1094	1484	1886	2276	2666	3056	3458	4238	
05	879	1366	1853	2355	2842	3328	3815	4318	5291	6280
06	1054	1638	2221	2824	3407	3991	4574	5177	6344	7530
07	1229	1910	2590	3293	3973	4653	5334	6036	7397	8780
08	1404	2182	2959	3761	4539	5316	6093	6896	8450	10030
09	1579	2453	3328	4230	5104	5978	6853	7755	9503	11280
10	1754	2725	3696	4699	5670	6641	7612	8614	10557	12530
11				5168	6235	7303	8371	9474	11610	13780
12				5636	6801	7966	9131	10333	12663	15030
14				6574	7932	9291	10649	12052	14769	17530
16				7511	9064	10616	12168	13771	16875	20030
18						11941	13687	15489	18982	22530
20								17208	21088	25030
22								18927	23194	27530
24								20646	25300	30030
26										32530
28										35030
32										40030

BORE CODE	LENGTH CODE									
	018	020	022	024	028	032	036	040	044	048
04										
05	7253									
06	8697	9883	11050							
07	10141	11524	12885	14268	17011					
08	11585	13164	14719	16299	19433					
09	13028	14805	16553	18330	21855	25380	28905			
10	14472	16446	18388	20361	24277	28193	32108	36024	39939	
11	15916	18086	20222	22393	26699	31005	35311	39618	43924	48230
12	17360	19727	22057	24424	29121	33818	38514	43211	47908	52605
14	20247	23008	25725	28486	33964	39443	44921	50399	55877	61355
16	23135	26289	29394	32549	38808	45068	51327	57586	63846	70105
18	26022	29571	33063	36611	43652	50693	57733	64774	71814	78855
20	28910	32852	36732	40674	48496	56318	64139	71961	79783	87605
22	31797	36133	40400	44736	53339	61943	70546	79149	87752	96355
24	34685	39414	44069	48799	58183	67568	76952	86336	95721	105105
26	37572	42696	47738	52861	63027	73193	83358	93524	103689	113855
28	40460	45977	51407	56924	67871	78818	89764	100711	111658	122605
32	46235	52539	58744	65049	77558	90068	102577	115086	127596	140105

BORE CODE	LENGTH CODE									
	052	056	060	064	068	072	076	080	088	096
04										
05										
06										
07										
08										
09										
10										
11	52536									
12	57302									
14	66833									
16	76364	82624	88883							
18	85896	92936	99977							
20	95427	103249	111071	118893	126714					
22	104958	113561	122164	130768	139371					
24	114489	123874	133258	142643	152027	161411	170796	180180	198949	
26	124021	134186	144352	154518	164683	174849	185014	195180	215511	235843
28	133552	144499	155446	166393	177339	188286	199233	210180	232074	253968
32	152614	165124	177633	190143	202652	215161	227671	240180	265199	290218

1/ STATIC CAPACITY MAY BE LIMITED BY PIN BENDING AND EDGE LOADING EFFECTS FOR LENGTHS > BORE DIAMETER.

	AEROSPACE STANDARD	**AS81934™/1**	**REV.**
SAE INTERNATIONAL®	(R) BEARING, SLEEVE, PLAIN, SELF-LUBRICATING, -65 °F TO 325 °F	SHEET 4 OF 8	**B**

TABLE 4 - CRES BEARINGS LIMIT LOAD RATINGS (LBF) 1/

BORE CODE	LENGTH CODE									
	005	006	007	008	009	010	011	012	014	016
04	1106	1718	2330	2961	3573	4185	4797	5429	6653	
05	1380	2144	2909	3697	4461	5226	5990	6778	8307	9860
06	1655	2571	3488	4433	5350	6266	7182	8128	9960	11822
07	1930	2998	4066	5169	6238	7306	8374	9477	11614	13785
08	2205	3425	4645	5905	7126	8346	9566	10826	13267	15747
09	2479	3852	5224	6641	8014	9386	10759	12175	14920	17710
10	2754	4279	5803	7377	8902	10426	11951	13525	16574	19672
11				8113	9790	11466	13143	14874	18227	21635
12				8849	10678	12506	14335	16223	19881	23597
14				10321	12454	14587	16720	18921	23187	27522
16				11793	14230	16667	19104	21620	26494	31447
18						18747	21489	24318	29801	35372
20								27017	33108	39297
22								29715	36415	43222
24								32414	39721	47147
26										51072
28										54997
32										62847

BORE CODE	LENGTH CODE									
	018	020	022	024	028	032	036	040	044	048
04										
05	11388									
06	13655	15517	17349							
07	15921	18092	20229	22400	26708					
08	18188	20668	23109	25589	30510					
09	20455	23244	25989	28778	34312	39847	45381			
10	22721	25820	28869	31967	38115	44262	50410	56557	62705	
11	24988	28395	31749	35156	41917	48678	55439	62199	68960	75721
12	27255	30971	34629	38345	45719	53093	60468	67842	75216	82590
14	31788	36123	40389	44723	53324	61925	70525	79126	87727	96327
16	36321	41274	46149	51102	60929	70756	80583	90410	100238	110065
18	40855	46426	51909	57480	68533	79587	90641	101695	112749	123802
20	45388	51577	57668	63858	76138	88418	100699	112979	125260	137540
22	49922	56729	63428	70236	83743	97250	110757	124264	137770	151277
24	54455	61881	69188	76614	91348	106081	120814	135548	150281	165015
26	58988	67032	74948	82992	98952	114912	130872	146832	162792	178752
28	63522	72184	80708	89370	106557	123743	140930	158117	175303	192490
32	72588	82487	92228	102127	121766	141406	161046	180685	200325	219965

BORE CODE	LENGTH CODE									
	052	056	060	064	068	072	076	080	088	096
04										
05										
06										
07										
08										
09										
10										
11	82482									
12	89964									
14	104928									
16	119892	129719	139547							
18	134856	145910	156964							
20	149820	162101	174381	186661	198942					
22	164784	178291	191798	205305	218812					
24	179748	194482	209215	223949	238682	253416	268149	282883	312350	
26	194712	210672	226632	242592	258553	274513	290473	306433	338353	370273
28	209676	226863	244050	261236	278423	295609	312796	329983	364356	398729
32	239605	259244	278884	298524	318163	337803	357443	377083	416362	455641

1/ STATIC CAPACITY MAY BE LIMITED BY PIN BENDING AND EDGE LOADING EFFECTS FOR LENGTHS > BORE DIAMETER

SAE INTERNATIONAL	AEROSPACE STANDARD (R) BEARING, SLEEVE, PLAIN, SELF-LUBRICATING, -65 °F TO 325 °F	AS81934™/1 SHEET 5 OF 8	REV. B

TABLE 5 - OSCILLATION LOAD RATINGS (LBF) 1/

BORE CODE	LENGTH CODE									
	005	006	007	008	009	010	011	012	014	016
04	528	821	1113	1415	1707	1999	2292	2594	3178	
05	659	1024	1389	1766	2131	2496	2861	3238	3968	4710
06	791	1228	1666	2118	2555	2993	3431	3883	4758	5648
07	922	1432	1943	2469	2980	3490	4000	4527	5548	6585
08	1053	1636	2219	2821	3404	3987	4570	5172	6338	7523
09	1184	1840	2496	3173	3828	4484	5139	5816	7128	8460
10	1316	2044	2772	3524	4252	4981	5709	6461	7917	9398
11				3876	4677	5478	6279	7105	8707	10335
12				4227	5101	5974	6848	7750	9497	11273
14				4930	5949	6968	7987	9039	11077	13148
16				5633	6798	7962	9126	10328	12656	15023
18						8956	10265	11617	14236	16898
20								12906	15816	18773
22								14195	17396	20648
24								15484	18975	22523
26										24398
28										26273
32										30023

BORE CODE	LENGTH CODE									
	018	020	022	024	028	032	036	040	044	048
04										
05	5440									
06	6523	7412	8288							
07	7606	8643	9663	10701	12758					
08	8688	9873	11039	12224	14575					
09	9771	11104	12415	13748	16391	19035	21679			
10	10854	12334	13791	15271	18208	21144	24081	27018	29955	
11	11937	13565	15167	16794	20024	23254	26483	29713	32943	36173
12	13020	14795	16542	18318	21840	25363	28886	32408	35931	39454
14	15185	17256	19294	21365	25473	29582	33690	37799	41908	46016
16	17351	19717	22046	24412	29106	33801	38495	43190	47884	52579
18	19517	22178	24797	27458	32739	38019	43300	48580	53861	59141
20	21682	24639	27549	30505	36372	42238	48105	53971	59837	65704
22	23848	27100	30300	33552	40005	46457	52909	59362	65814	72266
24	26013	29561	33052	36599	43637	50676	57714	64752	71790	78829
26	28179	32022	35803	39646	47270	54894	62519	70143	77767	85391
28	30345	34483	38555	42693	50903	59113	67323	75533	83744	91954
32	34676	39405	44058	48787	58169	67551	76933	86315	95697	105079

BORE CODE	LENGTH CODE									
	052	056	060	064	068	072	076	080	088	096
04										
05										
06										
07										
08										
09										
10										
11	39402									
12	42976									
14	50125									
16	57273	61968	66662							
18	64422	69702	74983							
20	71570	77437	83303	89169	95036					
22	78719	85171	91623	98076	104528					
24	85867	92905	99944	106982	114020	121058	128097	135135	149212	
26	93015	100640	108264	115888	123512	131137	138761	146385	161633	176882
28	100164	108374	116584	124794	133005	141215	149425	157635	174055	190476
32	114461	123843	133225	142607	151989	161371	170753	180135	198899	217663

1/ APPLICABLE TO OSCILLATION UNDER RADIAL LOAD CONDITIONS PER AS81934 FOR 25000 OR 100000 CYCLES

	AEROSPACE STANDARD	AS81934™/1	REV.
SAE INTERNATIONAL®	(R) BEARING, SLEEVE, PLAIN, SELF-LUBRICATING, -65 °F TO 325 °F	SHEET 6 OF 8	B