

## LIFE TIME TEST REPORT

시험자	확인자
김동운	권혁도

**Model** M5NUU1G1-100L  
**Purpose of test** Life time test for both LF and Non-LF seal  
**Test period** 2017-01-03 ~ 2017-09-08

**Test Device** Miniature Duration Tester



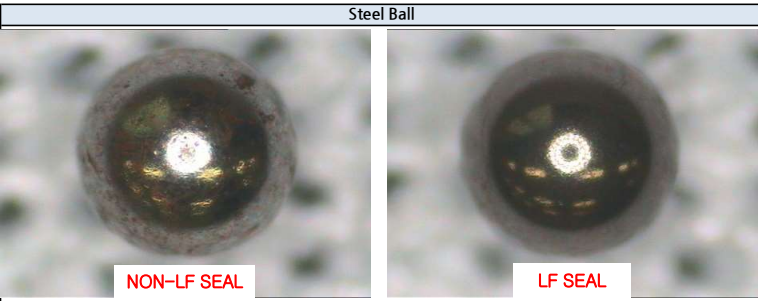
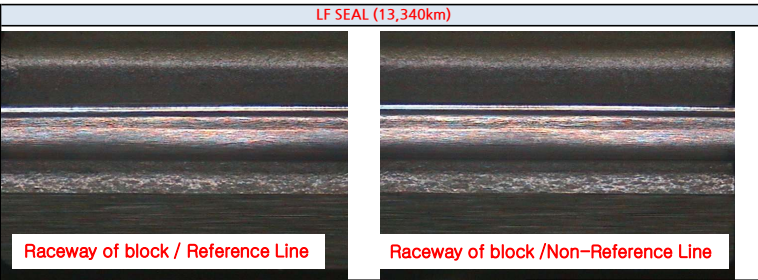
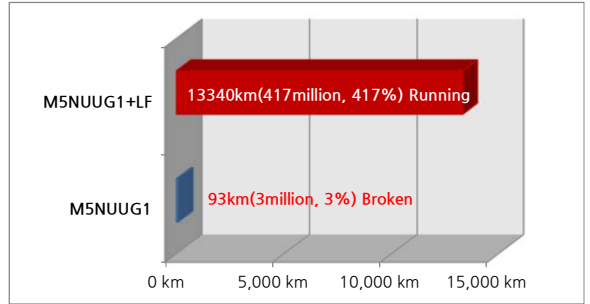
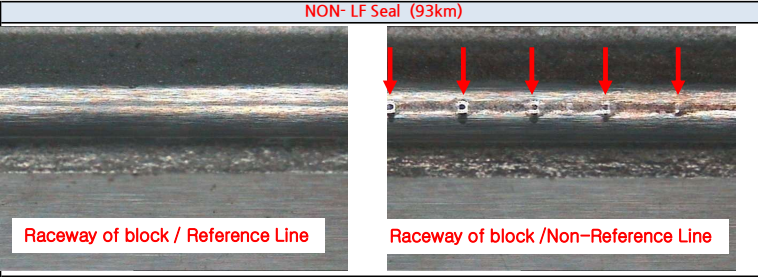
**Test condition**

Payload	0.02C
Stroke	±8 mm
Mean speed	309 mm/s
Max. speed	970 mm/s
Max. acceleration	12 G
Grease	NON Grease / Dry

**Normal Life Time**

$$L = \left( \frac{f_H \times f_T \times f_C}{f_W} \times \frac{C}{P_C} \right)^3 \times 50km$$

Factor of Load	1
Dyn. Load	631 N
Target distance	3,200 km
Target Cycle	100,000,000 times



Model	M5NUUG1	M5NUUG1+LF	CYCLE
Running Distance	93 km	13,340 km	416,880,232

DATE	Running Distance	Cycle ( Times )	
1/3	Start	-	
1/4	38 km	1,200,000	
1/5	93 km	2,912,517	Initial flaking
1/6	147 km	4,586,391	Additional flaking
1/9	302 km	9,423,412	Additional flaking
1/11	410 km	12,812,488	Additional flaking
1/12	458 km	14,311,381	Additional flaking
1/16	600 km	18,750,000	M5NUU Seriously damaged
1/16	674 km	21,072,093	M5NUU Broken
1/17	781 km	24,401,658	With LF SEAL ( Good )
1/19	836 km	26,126,938	With LF SEAL ( Good )
1/24	1,106 km	34,556,529	With LF SEAL ( Good )
2/1	1,525 km	47,643,759	With LF SEAL ( Good )
2/6	1,789 km	55,906,538	With LF SEAL ( Good )
2/7	1,842 km	57,568,554	With LF SEAL ( Good )
2/10	2,006 km	62,682,949	With LF SEAL ( Good )
2/13	2,169 km	67,768,681	With LF SEAL ( Good )
2/14	2,223 km	69,458,866	With LF SEAL ( Good )
2/16	2,385 km	74,535,140	With LF SEAL ( Good )
2/21	2,601 km	81,279,018	With LF SEAL ( Good )
2/22	2,655 km	82,976,196	With LF SEAL ( Good )
2/23	2,709 km	84,664,438	With LF SEAL ( Good )
2/24	2,763 km	86,350,638	With LF SEAL ( Good )
2/25	2,927 km	91,465,890	With LF SEAL ( Good )
2/26	2,980 km	93,121,611	With LF SEAL ( Good )
3/2	3,088 km	96,507,792	With LF SEAL ( Good )
3/3	3,142 km	98,184,886	With LF SEAL ( Good )
3/4	3,302 km	103,192,058	With LF SEAL ( Good )
3/5	3,410 km	106,562,416	With LF SEAL ( Good )
3/6	3,519 km	109,961,148	With LF SEAL ( Good )
3/13	3,682 km	115,054,361	With LF SEAL ( Good )
3/14	3,736 km	116,748,896	With LF SEAL ( Good )
3/15	3,789 km	118,394,765	With LF SEAL ( Good )
3/16	3,842 km	120,076,096	With LF SEAL ( Good )
3/17	3,896 km	121,764,516	With LF SEAL ( Good )
3/20	4,059 km	126,855,652	With LF SEAL ( Good )
3/21	4,111 km	128,482,420	With LF SEAL ( Good )
3/23	4,217 km	131,777,034	With LF SEAL ( Good )
3/24	4,271 km	133,459,439	With LF SEAL ( Good )
3/27	4,433 km	138,537,767	With LF SEAL ( Good )
3/28	4,488 km	140,236,791	With LF SEAL ( Good )
3/29	4,542 km	141,935,237	With LF SEAL ( Good )
3/30	4,600 km	143,765,585	With LF SEAL ( Good )
3/31	4,650 km	145,310,694	With LF SEAL ( Good )
4/3	4,812 km	150,389,522	With LF SEAL ( Good )
4/4	4,866 km	152,075,594	With LF SEAL ( Good )
4/5	4,924 km	153,867,076	With LF SEAL ( Good )
4/6	4,975 km	155,470,545	With LF SEAL ( Good )
4/10	5,193 km	162,268,492	With LF SEAL ( Good )
4/11	5,246 km	163,927,423	With LF SEAL ( Good )
4/12	5,300 km	165,611,711	With LF SEAL ( Good )
4/13	5,354 km	167,304,083	With LF SEAL ( Good )
4/17	5,572 km	174,127,209	With LF SEAL ( Good )
4/18	5,625 km	175,769,150	With LF SEAL ( Good )
4/19	5,679 km	177,479,765	With LF SEAL ( Good )
4/20	5,733 km	179,166,874	With LF SEAL ( Good )
4/21	5,787 km	180,847,647	With LF SEAL ( Good )
4/24	5,951 km	185,971,178	With LF SEAL ( Good )
4/25	6,004 km	187,634,690	With LF SEAL ( Good )
4/26	6,060 km	189,364,497	With LF SEAL ( Good )
4/27	6,113 km	191,019,243	With LF SEAL ( Good )
4/28	6,167 km	192,720,471	With LF SEAL ( Good )
5/1	6,332 km	197,885,029	With LF SEAL ( Good )
5/2	6,384 km	199,505,144	With LF SEAL ( Good )
5/12	6,939 km	216,850,995	With LF SEAL ( Good )
5/16	7,144 km	223,245,551	With LF SEAL ( Good )
5/19	7,305 km	228,289,244	With LF SEAL ( Good )
5/22	7,467 km	233,339,349	With LF SEAL ( Good )
5/24	7,576 km	236,755,084	With LF SEAL ( Good )
5/26	7,676 km	239,876,049	With LF SEAL ( Good )
5/30	7,905 km	247,025,563	With LF SEAL ( Good )
6/2	8,061 km	251,894,798	With LF SEAL ( Good )
6/7	8,329 km	260,286,470	With LF SEAL ( Good )
6/9	8,438 km	263,689,678	With LF SEAL ( Good )
6/14	8,698 km	271,805,021	With LF SEAL ( Good )
6/19	8,984 km	280,744,454	With LF SEAL ( Good )
6/28	9,452 km	295,389,453	With LF SEAL ( Good )
7/3	9,717 km	303,661,710	With LF SEAL ( Good )
7/12	10,199 km	318,725,075	With LF SEAL ( Good )
7/18	10,529 km	329,032,391	With LF SEAL ( Good )
7/20	10,645 km	332,657,062	With LF SEAL ( Good )
7/25	10,903 km	340,708,076	With LF SEAL ( Good )
8/7	11,608 km	362,741,139	With LF SEAL ( Good )
8/10	11,781 km	368,153,352	With LF SEAL ( Good )
9/8	13,340 km	416,880,232	Finish of TEST