Database Figures and Tables

Tables

Table 1: Wear severities dimensions from image processing.

Case	Wear depth [µm]	Case	Wear depth [µm]	Case	Wear depth [µm]	Case	Wear depth [µm]
Healthy	0.0	W9	285.2	W18	442.4	W27	686.4
W1	38.0	W10	299.5	W19	464.6	W28	720.7
W2	77.0	W11	314.4	W20	487.8	W29	756.7
W3	115.0	W12	330.1	W21	512.2	W30	794.5
W4	152.0	W13	346.7	W22	537.8	W31	834.3
W5	166.0	W14	364.0	W23	564.7	W32	876.0
W6	185.0	W15	382.2	W24	592.9	W33	919.8
W7	258.7	W16	401.3	W25	622.5	W34	965.8
W8	271.6	W17	421.4	W26	653.7	W35	1000.0

Table 2: Wear depth dimensions for all teeth from image processing.

Case	Tooth	Wear depth [µm]	Case	Tooth	Wear depth [µm]	Case	Tooth	Wear depth [µm]
Healthy	1	0.0	W1	1	38.0	W2	1	77.0
	2			2	41.2		2	74.2
	3			3	35.6		3	75.7
	4			4	37.2		4	76.3
	5			5	37.5		5	77.3
	6			6	42.1		6	74.8
	7			7	38.9		7	68.2
	8			8	36.0		8	77.4
	9			9	37.6		9	75.3
	10			10	38.6		10	75.8
	11			11	35.8		11	79.7
	12			12	40.8		12	77.9
	13			13	37.7		13	77.5
	14			14	38.0		14	76.5
	15			15	39.2		15	76.9
	16			16	35.2		16	73.0
	17			17	34.5		17	77.5
	18			18	38.2		18	73.5
	19			19	38.0		19	74.8

	20			20	38.3		20	71.9
	21			21	37.6		21	79.0
	22			22	38.9		22	84.6
	23			23	35.9		23	79.1
	24			24	38.5		24	66.5
	25			25	36.7		25	78.2
	26			26	36.7		26	75.9
	27			27	36.9		27	77.8
	28			28	37.2		28	81.9
	29			29	34.9		29	78.0
	30			30	37.2		30	80.4
	31			31	38.9		31	78.6
	32			32	37.0		32	72.5
	33			33	36.0		33	80.4
	34			34	37.6		34	80.2
	35			35	35.6		35	77.2
	1	115.0		1	152.0		1	166.0
	2	121.3		2	151.7		2	166.1
	3	110.2		3	154.5		3	165.8
	4	121.9		4	143.0		4	161.4
	5	116.1		5	144.0		5	162.2
	6	114.3		6	152.6		6	162.4
	7	110.4		7	152.1		7	162.2
	8	118.9		8	161.7		8	172.0
	9	118.4		9	154.1		9	159.3
	10	118.1		10	154.3		10	160.1
	11	102.4		11	154.8		11	172.8
W3	12	112.7	W4	12	152.6	W5	12	164.4
	13	116.1		13	143.3		13	160.0
	14	116.0		14	152.6		14	170.7
	15	106.5		15	149.0		15	192.2
	16	118.0		16	141.6		16	171.0
	17	121.2		17	152.6		17	163.9
	18	104.8		18	144.0		18	172.9
	19	116.0		19	158.5		19	178.8
	20	109.3		20	148.3		20	154.3
	21	116.0		21	159.6		21	170.9
	22	108.8		22	146.8		22	169.2
	23	115.4		23	154.1		23	173.5

	24	115.1		24	150.9		24	154.1
	25	125.5		25	145.9		25	160.5
	26	121.8		26	150.2		26	165.8
	27	124.9		27	152.1		27	170.4
	28	110.4		28	153.5		28	158.1
	29	104.0		29	141.2		29	171.2
	30	107.2		30	155.6		30	163.9
	31	109.7		31	151.7		31	157.3
	32	115.7		32	153.4		32	179.0
	33	124.9		33	145.8		33	168.1
	34	114.8		34	141.7		34	170.8
	35	117.7		35	145.3		35	176.9
	1	185.0		1	258.7		1	271.6
	2	175.7		2	252.5		2	305.9
	3	206.0		3	252.5		3	264.5
	4	177.4		4	262.3		4	262.3
	5	185.1		5	268.5		5	272.6
	6	192.1		6	228.2		6	278.5
	7	182.5		7	252.9		7	268.4
	8	175.6		8	252.9		8	273.4
	9	180.8		9	262.2		9	272.4
	10	179.3		10	264.5		10	273.4
	11	179.4		11	284.0		11	284.0
	12	184.9		12	249.4		12	305.4
	13	189.9		13	281.3		13	295.0
W6	14	188.4	W7	14	231.4	W8	14	279.2
	15	192.2		15	237.7		15	276.5
	16	187.3		16	242.0		16	261.1
	17	177.2		17	275.4		17	275.4
	18	195.3		18	263.8		18	279.0
	19	190.1		19	274.5		19	281.0
	20	189.4		20	279.6		20	279.6
	21	175.7		21	256.7		21	256.7
	22	192.8		22	259.4		22	262.8
	23	193.7		23	258.1		23	273.3
	24	179.6		24	263.1		24	263.1
	25	178.1		25	272.4		25	283.8
	26	185.3		26	256.6		26	271.5
	27	180.5		27	269.8		27	269.8

	28	186.3		28	262.8		28	262.8
	29	180.6		29	277.4		29	277.4
	30	184.9		30	244.7		30	278.1
	31	172.1		31	266.4		31	266.4
	32	183.1		32	233.5		32	265.7
	33	179.7		33	246.9		33	277.1
	34	181.9		34	250.3		34	254.5
	35	188.6		35	257.7		35	283.6
	1	285.2		1	299.5		1	314.4
	2	305.9		2	305.9		2	329.3
	3	300.4		3	300.4		3	319.7
	4	292.2		4	308.4		4	308.4
	5	288.4		5	291.2		5	291.2
	6	304.8		6	304.8		6	359.8
	7	282.8		7	320.6		7	331.5
	8	299.1		8	309.4		8	320.3
	9	274.2		9	282.9		9	301.3
	10	297.8		10	297.8		10	315.9
	11	284.0		11	284.0		11	294.0
	12	305.4		12	311.2		12	327.9
	13	295.0		13	295.0		13	299.0
	14	300.2		14	310.9		14	310.9
	15	293.9		15	293.9		15	340.9
W9	16	293.1	W10	16	307.0	W11	16	308.0
	17	284.9		17	330.9		17	330.9
	18	290.4		18	297.5		18	303.8
	19	281.0		19	288.2		19	310.6
	20	293.8		20	293.8		20	299.3
	21	286.6		21	310.3		21	354.4
	22	265.5		22	284.3		22	297.5
	23	273.3		23	302.9		23	322.3
	24	312.8		24	331.3		24	331.3
	25	295.6		25	323.8		25	323.8
	26	291.9		26	314.5		26	314.5
	27	271.4		27	303.0		27	316.0
	28	308.9		28	308.9		28	326.0
	29	277.4		29	298.0		29	298.0
	30	285.6		30	285.6		30	291.1
	31	286.7		31	287.2		31	304.8

	32	265.7		32	324.0		32	324.0
	33	280.2		33	338.5		33	338.5
	34	295.9		34	296.5		34	314.3
	35	293.8		35	293.8		35	309.9
	1	330.1		1	346.7		1	364.0
	2	340.3		2	353.8		2	394.0
	3	335.1		3	346.1		3	376.5
	4	337.5		4	342.7		4	379.9
	5	318.2		5	322.1		5	330.8
	6	359.8		6	359.8		6	361.2
	7	341.4		7	348.0		7	415.6
	8	343.7		8	355.5		8	372.3
	9	335.5		9	340.2		9	340.2
	10	348.3		10	355.6		10	382.9
	11	350.1		11	350.1		11	354.0
	12	342.3		12	361.4		12	370.1
	13	338.5		13	346.5		13	346.5
	14	310.9		14	361.0		14	361.0
	15	340.9		15	353.6		15	355.7
	16	355.7		16	355.7		16	362.7
	17	333.3		17	335.3		17	364.6
W12	18	347.3	W13	18	349.3	W14	18	370.6
	19	359.7		19	359.7		19	359.7
	20	329.6		20	354.2		20	358.9
	21	354.4		21	354.4		21	354.4
	22	326.8		22	356.0		22	391.3
	23	322.3		23	335.7		23	357.8
	24	341.7		24	341.7		24	361.0
	25	353.3		25	353.3		25	353.3
	26	355.9		26	355.9		26	365.5
	27	334.6		27	380.2		27	380.2
	28	326.0		28	349.7		28	349.7
	29	315.8		29	345.1		29	356.0
	30	316.5		30	334.3		30	346.5
	31	337.1		31	346.0		31	351.8
	32	381.5		32	381.5		32	381.5
	33	340.4		33	368.1		33	368.1
	34	337.9		34	361.6		34	361.6
	35	341.5		35	341.5		35	350.3

W15	1	382.2	W16	1	401.3	W17	1	421.4
	2	405.1		2	405.1		2	440.7
	3	399.0		3	399.0		3	454.6
	4	379.9		4	404.7		4	419.4
	5	355.8		5	407.2		5	414.8
	6	364.3		6	399.8		6	438.9
	7	415.6		7	415.6		7	424.2
	8	372.3		8	421.5		8	421.5
	9	380.3		9	414.0		9	414.0
	10	382.9		10	416.1		10	416.1
	11	354.2		11	377.0		11	448.4
	12	398.3		12	403.4		12	424.8
	13	379.5		13	407.6		13	407.6
	14	381.6		14	408.7		14	427.4
	15	383.1		15	383.1		15	435.0
	16	398.9		16	398.9		16	426.3
	17	385.4		17	444.3		17	444.3
	18	388.6		18	388.6		18	414.7
	19	389.4		19	389.4		19	451.5
	20	401.4		20	428.1		20	446.2
	21	354.4		21	407.4		21	430.5
	22	391.3		22	391.3		22	438.1
	23	407.2		23	407.2		23	407.2
	24	379.4		24	379.4		24	409.5
	25	390.5		25	410.6		25	410.6
	26	378.1		26	408.1		26	433.3
	27	405.5		27	418.4		27	418.4
	28	380.5		28	409.8		28	409.8
	29	373.5		29	402.0		29	406.9
	30	403.7		30	403.7		30	452.3
	31	407.8		31	407.8		31	407.8
	32	381.5		32	421.6		32	421.6
	33	375.0		33	442.4		33	442.4
	34	375.7		34	375.7		34	428.7
	35	355.4		35	364.3		35	427.4
W18	1	442.4	W19	1	464.6	W20	1	487.8
	2	447.7		2	464.6		2	464.6
	3	454.6		3	458.9		3	458.9
	4	419.4		4	481.1		4	519.5

	5	434.8		5	439.4		5	499.6
	6	438.9		6	490.7		6	490.7
	7	424.2		7	494.5		7	494.5
	8	451.8		8	489.1		8	489.1
	9	448.6		9	450.3		9	498.3
	10	421.3		10	451.6		10	485.2
	11	495.6		11	495.6		11	495.6
	12	434.7		12	530.1		12	530.1
	13	437.4		13	437.4		13	494.6
	14	471.7		14	471.7		14	473.6
	15	435.3		15	435.3		15	490.9
	16	431.1		16	454.7		16	495.0
	17	452.2		17	455.1		17	462.9
	18	457.6		18	457.6		18	481.0
	19	451.5		19	477.4		19	482.5
	20	446.2		20	446.2		20	446.2
	21	462.2		21	483.4		21	524.1
	22	438.1		22	453.2		22	487.8
	23	423.5		23	423.5		23	505.2
	24	465.4		24	494.1		24	528.5
	25	438.0		25	484.3		25	485.5
	26	433.3		26	449.4		26	477.3
	27	431.9		27	514.4		27	514.4
	28	434.3		28	449.0		28	460.0
	29	469.9		29	469.9		29	477.6
	30	452.3		30	452.3		30	522.0
	31	430.2		31	512.1		31	524.8
	32	441.3		32	441.3		32	511.2
	33	442.4		33	461.7		33	496.8
	34	450.9		34	450.9		34	486.9
	35	427.4		35	427.4		35	495.5
W21	1	512.2	W22	1	537.8	W23	1	564.7
	2	543.4		2	543.4		2	575.1
	3	492.9		3	552.1		3	552.1
	4	530.0		4	543.2		4	572.0
	5	501.5		5	501.5		5	539.9
	6	548.8		6	589.7		6	589.7
	7	535.7		7	542.5		7	549.3
	8	557.6		8	592.9		8	592.9

	9	528.9		9	528.9		9	557.6
	10	559.0		10	559.0		10	559.1
	11	517.5		11	556.2		11	589.8
	12	565.2		12	565.2		12	593.5
	13	494.6		13	528.7		13	607.5
	14	509.6		14	558.6		14	569.1
	15	547.8		15	566.2		15	566.2
	16	495.0		16	501.3		16	566.1
	17	499.6		17	571.5		17	571.5
	18	540.2		18	546.7		18	589.1
	19	516.9		19	537.4		19	562.6
	20	484.1		20	494.6		20	562.4
	21	539.0		21	539.0		21	610.1
	22	487.8		22	512.5		22	555.0
	23	529.5		23	576.5		23	576.5
	24	528.5		24	528.5		24	613.3
	25	523.6		25	523.6		25	547.1
	26	546.7		26	565.4		26	585.5
	27	514.4		27	553.8		27	553.8
	28	479.6		28	538.4		28	538.4
	29	479.8		29	557.7		29	557.7
	30	526.6		30	526.6		30	570.5
	31	524.8		31	524.8		31	578.5
	32	511.2		32	511.2		32	517.1
	33	514.4		33	525.1		33	591.9
	34	499.1		34	620.5		34	620.5
	35	521.7		35	523.5		35	523.5
	1	592.9		1	622.5		1	653.7
	2	644.0		2	644.0		2	644.0
	3	645.3		3	655.8		3	655.8
	4	641.7		4	641.9		4	725.4
	5	557.3		5	665.3		5	690.3
W24	6	589.7	W25	6	659.3	W26	6	659.3
	7	592.1		7	592.1		7	696.3
	8	592.9		8	633.5		8	665.2
	9	570.8		9	632.9		9	730.7
	10	587.9		10	587.9		10	632.4
	11	589.8		11	616.8		11	676.6
	12	597.3		12	616.3		12	651.6

	13	626.7		13	626.7		13	688.6
	14	586.3		14	586.3		14	591.1
	15	576.5		15	632.1		15	652.4
	16	595.5		16	682.1		16	682.1
	17	571.5		17	658.8		17	658.8
	18	631.2		18	631.2		18	631.2
	19	622.7		19	651.8		19	651.8
	20	606.7		20	656.0		20	707.8
	21	610.1		21	610.1		21	637.3
	22	565.2		22	648.3		22	675.7
	23	596.0		23	601.3		23	655.6
	24	613.3		24	613.3		24	639.8
	25	605.0		25	623.2		25	655.7
	26	601.2		26	601.2		26	633.7
	27	623.7		27	623.7		27	634.1
	28	538.4		28	659.5		28	659.5
	29	587.4		29	590.7		29	688.1
	30	571.8		30	679.2		30	679.2
	31	608.7		31	608.7		31	647.9
	32	564.6		32	639.9		32	643.5
	33	591.9		33	637.9		33	667.8
	34	620.5		34	620.5		34	671.3
	35	610.0		35	645.4		35	670.9
W27	1	686.4	W28	1	720.7	W29	1	756.7
	2	717.9		2	735.8		2	735.8
	3	728.5		3	728.5		3	751.6
	4	725.4		4	771.8		4	771.8
	5	697.3		5	705.3		5	713.2
	6	659.3		6	735.3		6	830.4
	7	729.1		7	729.1		7	845.7
	8	724.0		8	724.0		8	810.4
	9	730.7		9	730.7		9	744.5
	10	712.9		10	712.9		10	731.7
	11	676.6		11	743.6		11	743.6
	12	693.0		12	707.2		12	801.3
	13	688.6		13	727.5		13	752.2
	14	677.4		14	677.4		14	744.2
	15	652.4		15	681.2		15	771.4
	16	750.7		16	750.7		16	807.7

	17	663.1		17	711.0		17	756.1
	18	745.5		18	745.5		18	762.4
	19	727.6		19	737.7		19	749.9
	20	707.8		20	707.8		20	753.9
	21	692.4		21	692.6		21	769.6
	22	675.7		22	687.2		22	738.6
	23	687.9		23	723.9		23	796.2
	24	659.7		24	715.4		24	802.7
	25	670.2		25	697.3		25	762.6
	26	738.1		26	738.1		26	798.5
	27	673.0		27	740.5		27	770.2
	28	667.4		28	680.4		28	731.1
	29	688.1		29	688.1		29	784.5
	30	695.1		30	724.7		30	775.7
	31	660.9		31	767.0		31	767.0
	32	695.8		32	707.2		32	707.2
	33	713.5		33	728.2		33	820.4
	34	671.3		34	671.3		34	825.4
	35	681.9		35	747.0		35	754.2
	1	794.5		1	834.3		1	876.0
	2	801.7		2	846.9		2	846.9
	3	844.9		3	909.7		3	909.7
	4	771.8		4	801.5		4	850.8
	5	768.1		5	860.8		5	860.8
	6	830.4		6	830.4		6	917.0
	7	845.7		7	849.2		7	899.3
	8	810.4		8	816.8		8	870.5
	9	750.6		9	830.4		9	875.8
W30	10	781.2	W31	10	891.6	W32	10	891.6
	11	820.5		11	829.8		11	829.8
	12	801.3		12	852.5		12	937.1
	13	752.2		13	809.4		13	836.6
	14	760.5		14	845.4		14	873.3
	15	804.4		15	831.9		15	831.9
	16	807.7		16	830.4		16	886.7
	17	846.7		17	948.9		17	948.9
	18	766.8		18	873.7		18	873.7
	19	896.0		19	896.0		19	896.0
	20	792.8		20	823.7		20	852.3

	21	772.7		21	807.1		21	836.5
	22	799.3		22	915.3		22	935.1
	23	796.2		23	799.1		23	894.6
	24	802.7		24	845.0		24	845.0
	25	765.3		25	829.7		25	880.5
	26	798.5		26	839.0		26	891.7
	27	794.0		27	875.8		27	875.8
	28	777.4		28	789.4		28	892.3
	29	805.7		29	805.7		29	898.4
	30	788.7		30	842.6		30	879.3
	31	813.7		31	848.7		31	878.7
	32	741.1		32	841.9		32	898.4
	33	820.4		33	860.3		33	947.1
	34	825.4		34	825.4		34	880.5
	35	754.2		35	797.2		35	957.9
	1	919.8		1	965.8		1	1000.0
	2	906.9		2	949.1		2	1001.9
	3	955.9		3	955.9		3	998.7
	4	915.8		4	959.1		4	978.2
	5	943.3		5	956.2		5	1040.1
	6	955.4		6	955.4		6	973.8
	7	927.2		7	1030.6		7	1030.6
	8	870.5		8	997.7		8	997.7
	9	938.5		9	1046.1		9	1046.1
	10	891.6		10	910.3		10	990.8
	11	889.1		11	951.1		11	1043.8
W33	12	1034.3	W34	12	1034.3	W35	12	1034.3
	13	948.6		13	958.4		13	1054.0
	14	892.5		14	931.9		14	1006.7
	15	926.9		15	1064.1		15	1064.1
	16	886.7		16	886.7		16	1052.1
	17	948.9		17	948.9		17	1070.3
	18	880.2		18	953.3		18	1010.1
	19	896.5		19	918.8		19	963.1
	20	870.5		20	1005.6		20	1005.6
	21	936.7		21	962.4		21	962.4
	22	935.1		22	962.1		22	994.5
	23	1039.0		23	1039.0		23	1039.0
	24	944.3		24	984.0		24	1018.8

	25	941.1		25	941.1	25	1016.7
	26	921.6		26	982.5	26	1013.5
	27	911.6		27	972.1	27	979.6
	28	937.5		28	937.5	28	937.5
	29	898.4		29	999.7	29	999.7
	30	952.8		30	952.8	30	1075.7
	31	885.4		31	906.6	31	1015.3
	32	1012.9		32	1012.9	32	1012.9
	33	947.1		33	947.1	33	1035.8
	34	901.2		34	917.3	34	1081.0
	35	957.9		35	957.9	35	993.5

Table 3: Vibration signals recording - Format YYYYMMDDHHMM.

Record number	Record at 45 [RPS]	Record at 15 [RPS]	Status
1	202302131332	202302131613	Healthy
2	202302131333	202302131614	
3	202302131334	202302131616	
4	202302131335	202302131617	
5	202302131337	202302131619	
6	202302131338	202302131620	
7	202302131339	202302131621	
8	202302131340	202302131629	
9	202302131349	202302131630	
10	202302131350	202302131631	
11	202302131353	202302131632	
12	202302131354	202302131633	
13	202302131355	202302131634	
14	202302131356	202302131636	
15	202302131357	202302131637	
16	202302131406	202302131638	
17	202302131407	202302131653	
18	202302131408	202302131654	
19	202302131410	202302131655	
20	202302131412	202302131656	
21	202302131413	202302131657	
22	202302131414	202302131658	
23	202302131415	202302131700	
24	202302131416	202302131701	
25	202302131442	202302131707	

26	202302131444	202302131708	
27	202302131445	202302131709	
28	202302131446	202302131710	
29	202302131447	202302131711	
30	202302131448	202302131712	
31	202302131449	202302131713	
32	202302131450	202302131715	
33	202302131502	202302131722	
34	202302131504	202302131724	
35	202302131505	202302131725	
36	202302131506	202302131726	
37	202302131507	202302131728	
38	202302131508	202302131729	
39	202302131509	202302131730	
40	202302131510	202302131737	
41	202302131520	202302131738	
42	202302131521	202302131739	
43	202302131522	202302131740	
44	202302131523	202302131741	
45	202302131525	202302131743	
46	202302131527	202302131744	
47	202302131528	202302131745	
48	202302131537	202302131746	
49	202302131538	202302131754	
50	202302131539	202302131755	
51	202302131540	202302131756	
52	202302131541	202302131757	
53	202302131542	202302131758	
54	202302131544	202302131759	
55	202302131545	202302131801	
56	202302131546	202302131802	
57	202302151433	202302151547	
58	202302151434	202302151549	
59	202302151435	202302151550	
60	202302151436	202302151551	
61	202302151437	202302151552	
62	202302151438	202302151553	
63	202302151439	202302151554	
64	202302151441	202302151613	
65	202302151501	202302151614	
66	202302151502	202302151615	

67	202302151503	202302151616	
68	202302151504	202302151618	
69	202302151505	202302151619	
70	202302151506	202302151620	
71	202302151508	202302151621	
72	202302151509	202302151622	
73	202302151516	202302151630	
74	202302151517	202302151631	
75	202302151518	202302151632	
76	202302151519	202302151633	
77	202302151520	202302151635	
78	202302151522	202302151636	
79	202302151523	202302151637	
80	202302151524	202302151638	
81	202302160928	202302161045	
82	202302160929	202302161046	
83	202302160930	202302161047	
84	202302160931	202302161048	
85	202302160932	202302161049	
86	202302160933	202302161051	
87	202302160934	202302161052	
88	202302160935	202302161053	
89	202302160952	202302161117	
90	202302160953	202302161120	
91	202302160954	202302161121	
92	202302160955	202302161122	
93	202302160956	202302161123	
94	202302160957	202302161124	
95	202302160958	202302161125	
96	202302161000	202302161133	
97	202302161007	202302161134	
98	202302161008	202302161136	
99	202302161010	202302161137	
100	202302161012	202302161138	
101	202302161013	202302161139	
102	202302161014	202302161140	
103	202302161015	202302161141	
104	202302161022	202302161143	
105	202302161023	202302161149	

106	202302161025	202302161150	
107	202302161026	202302161151	
108	202302161027	202302161154	
109	202302161028	202302161155	
110	202302161029	202302161156	
111	202302161030	202302161157	
112	202302161031	202302161158	
113	202302231422	202302231540	
114	202302231424	202302231542	
115	202302231425	202302231543	
116	202302231427	202302231544	
117	202302231428	202302231545	
118	202302231429	202302231547	
119	202302231430	202302231548	
120	202302231431	202302231554	
121	202302231451	202302231555	
122	202302231452	202302231556	
123	202302231453	202302231559	
124	202302231454	202302231600	
125	202302231455	202302231601	
126	202302231456	202302231602	
127	202302231458	202302231603	
128	202302231459	202302231609	
129	202302231514	202302231611	
130	202302231515	202302231612	
131	202302231516	202302231613	
132	202302231518	202302231614	
133	202302231519	202302231615	
134	202302231520	202302231617	
135	202302231521	202302231618	
136	202302231522	202302231619	
137	202302271553	202302271829	
138	202302271554	202302271830	
139	202302271556	202302271832	
140	202302271557	202302271833	
141	202302271559	202302271834	
142	202302271600	202302271835	
143	202302271601	202302271836	
144	202302271609	202302271837	

145	202302271610	202302271842	
146	202302271611	202302271843	
147	202302271613	202302271844	
148	202302271614	202302271845	
149	202302271615	202302271846	
150	202302271616	202302271847	
151	202302271617	202302271849	
152	202302271618	202302271850	
153	202302271624	202302271855	
154	202302271625	202302271856	
155	202302271627	202302271857	
156	202302271631	202302271859	
157	202302271632	202302271900	
158	202302271633	202302271901	
159	202302271634	202302271902	
160	202302271636	202302281543	
161	202302281222	202302281544	
162	202302281224	202302281546	
163	202302281225	202302281547	
164	202302281226	202302281548	
165	202302281227	202302281549	
166	202302281228	202302281550	
167	202302281229	202302281551	
168	202302281230	202302281552	
169	202302281231	202302281554	
170	202302281234	202302281555	
171	202302281235	202302281601	
172	202302281236	202302281602	
173	202302281237	202302281603	
174	202302281238	202302281604	
175	202302281239	202302281605	
176	202302281240	202302281607	
177	202302281241	202302281608	
178	202302281242	202302281609	
179	202302281244	202302281610	
180	202302281245	202302281611	
181	202302281247	202302281620	
182	202302281248	202302281621	
183	202302281250	202302281622	

184	202302281251	202302281623	
185	202302281252	202302281624	
186	202302281253	202302281625	
187	202302281254	202302281626	
188	202302281255	202302281627	
189	202302281257	202302281628	
190	202302281258	202302281630	
191	202302281300	202302281635	
192	202302281301	202302281636	
193	202302281302	202302281637	
194	202302281303	202302281638	
195	202302281304	202302281640	
196	202302281306	202302281641	
197	202302281307	202302281642	
198	202302281308	202302281643	
199	202302281309	202302281644	
200	202302281310	202302281645	
201	202302281330	202302281654	
202	202302281331	202302281655	
203	202302281332	202302281656	
204	202302281333	202302281657	
205	202302281334	202302281658	
206	202302281335	202302281659	
207	202302281336	202302281700	
208	202302281338	202302281702	
209	202302281339	202302281703	
210	202302281340	202302281704	
211	202302281344	202302281709	
212	202302281345	202302281710	
213	202302281346	202302281711	
214	202302281347	202302281712	
215	202302281348	202302281713	
216	202302281349	202302281714	
217	202302281350	202302281716	
218	202302281352	202302281717	
219	202302281353	202302281718	
220	202302281354	202302281719	
221	202302281358	202302281723	
222	202302281359	202302281725	

223	202302281400	202302281726	
224	202302281401	202302281727	
225	202302281402	202302281728	
226	202302281403	202302281729	
227	202302281405	202302281730	
228	202302281406	202302281731	
229	202302281407	202302281732	
230	202302281408	202302281733	
231	202302281412	202302281739	
232	202302281413	202302281741	
233	202302281414	202302281742	
234	202302281415	202302281743	
235	202302281416	202302281744	
236	202302281418	202302281745	
237	202302281419	202302281746	
238	202302281420	202302281747	
239	202302281421	202302281748	
240	202302281427	202302281749	
241	202302281428	202302281754	
242	202302281429	202302281755	
243	202302281431	202302281756	
244	202302281432	202302281757	
245	202302281433	202302281758	
246	202302281434	202302281759	
247	202302281436	202302281800	
248	202302281437	202302281801	
249	202302281438	202302281803	
250	202302281451	202302281804	
251	202304091222	202304091345	W1
252	202304091252	202304091346	
253	202304091253	202304091355	
254	202304091254	202304091356	
255	202304091301	202304091408	
256	202304091307	202304091409	
257	202304091308	202304091415	
258	202304091309	202304091416	
259	202304091747	202304091851	W2
260	202304091748	202304091853	
261	202304091757	202304091900	

262	202304091805	202304091902	
263	202304091806	202304091907	
264	202304091807	202304091909	
265	202304091814	202304091914	
266	202304091820	202304091915	
267	202304101054	202304101231	W3
268	202304101055	202304101232	
269	202304101107	202304101239	
270	202304101109	202304101241	
271	202304101117	202304101246	
272	202304101119	202304101247	
273	202304101126	202304101253	
274	202304101127	202304101254	
275	202304101549	202304101700	W4
276	202304101550	202304101701	
277	202304101610	202304101705	
278	202304101611	202304101707	
279	202304101618	202304101712	
280	202304101619	202304101713	
281	202304101625	202304101718	
282	202304101626	202304101719	
283	202304101913	202304102044	W5
284	202304101915	202304102045	
285	202304101924	202304102050	
286	202304101925	202304102051	
287	202304101931	202304102056	
288	202304101933	202304102057	
289	202304101939	202304102102	
290	202304101940	202304102103	
291	202304131741	202304131934	W6
292	202304131742	202304131942	
293	202304131755	202304131943	
294	202304131756	202304131945	
295	202304131802	202304131951	
296	202304131803	202304131952	
297	202304131810	202304131958	
298	202304131812	202304131959	
299	202304161132	202304161240	W7
300	202304161133	202304161241	

301	202304161147	202304161251	
302	202304161148	202304161252	
303	202304161155	202304161258	
304	202304161156	202304161259	
305	202304161203	202304161304	
306	202304161204	202304161305	
307	202304161701	202304161810	W8
308	202304161702	202304161811	
309	202304161714	202304161816	
310	202304161715	202304161818	
311	202304161721	202304161823	
312	202304161722	202304161824	
313	202304161728	202304161829	
314	202304161729	202304161830	
315	202304181308	202304181405	W9
316	202304181319	202304181417	
317	202304181320	202304181418	
318	202304181321	202304181419	
319	202304181327	202304181425	
320	202304181328	202304181426	
321	202304181334	202304181431	
322	202304181335	202304181432	
323	202304191311	202304191411	W10
324	202304191312	202304191412	
325	202304191323	202304191421	
326	202304191324	202304191422	
327	202304191331	202304191427	
328	202304191337	202304191428	
329	202304191338	202304191434	
330	202304191339	202304191435	
331	202304191913	202304192014	W11
332	202304191914	202304192015	
333	202304191925	202304192023	
334	202304191926	202304192024	
335	202304191932	202304192029	
336	202304191933	202304192030	
337	202304191941	202304192034	
338	202304191942	202304192035	
339	202304201209	202304201316	W12

340	202304201220	202304201318	
341	202304201221	202304201324	
342	202304201222	202304201325	
343	202304201229	202304201330	
344	202304201230	202304201331	
345	202304201236	202304201336	
346	202304201237	202304201337	
347	202304231225	202304231320	W13
348	202304231226	202304231321	
349	202304231236	202304231328	
350	202304231237	202304231330	
351	202304231243	202304231336	
352	202304231244	202304231337	
353	202304231249	202304231342	
354	202304231250	202304231343	
355	202304231715	202304231807	W14
356	202304231716	202304231808	
357	202304231724	202304231815	
358	202304231725	202304231816	
359	202304231730	202304231821	
360	202304231731	202304231822	
361	202304231737	202304231827	
362	202304231738	202304231828	
363	202304232100	202304232150	W15
364	202304232101	202304232151	
365	202304232108	202304232156	
366	202304232109	202304232158	
367	202304232115	202304232203	
368	202304232116	202304232204	
369	202304232121	202304232208	
370	202304232122	202304232209	
371	202305011224	202305011320	W16
372	202305011225	202305011321	
373	202305011234	202305011328	
374	202305011235	202305011329	
375	202305011241	202305011335	
376	202305011242	202305011336	
377	202305011248	202305011341	
378	202305011249	202305011342	

379	202305012001	202305012051	W17
380	202305012002	202305012052	
381	202305012009	202305012058	
382	202305012010	202305012059	
383	202305012015	202305012104	
384	202305012016	202305012105	
385	202305012022	202305012111	
386	202305012023	202305012112	
387	202305021319	202305021420	W18
388	202305021320	202305021421	
389	202305021328	202305021428	
390	202305021329	202305021429	
391	202305021335	202305021434	
392	202305021336	202305021435	
393	202305021342	202305021441	
394	202305021343	202305021442	
395	202305031351	202305031456	W19
396	202305031352	202305031504	
397	202305031401	202305031505	
398	202305031402	202305031506	
399	202305031409	202305031511	
400	202305031410	202305031512	
401	202305031416	202305031517	
402	202305031417	202305031518	
403	202305071129	202305071230	W20
404	202305071130	202305071231	
405	202305071142	202305071238	
406	202305071143	202305071239	
407	202305071152	202305071245	
408	202305071153	202305071246	
409	202305071158	202305071304	
410	202305071159	202305071305	
411	202305071650	202305071748	W21
412	202305071651	202305071749	
413	202305071658	202305071756	
414	202305071700	202305071757	
415	202305071707	202305071803	
416	202305071708	202305071804	
417	202305071714	202305071809	

418	202305071715	202305071810	
419	202305101851	202305140943	W22
420	202305101852	202305140953	
421	202305101902	202305140955	
422	202305101904	202305140956	
423	202305101910	202305141002	
424	202305101911	202305141004	
425	202305101917	202305141009	
426	202305101918	202305141010	
427	202305141639	202305141754	W23
428	202305141640	202305141755	
429	202305141649	202305141800	
430	202305141650	202305141801	
431	202305141731	202305141808	
432	202305141732	202305141809	
433	202305141738	202305141815	
434	202305141739	202305141816	
435	202305231736	202305231831	W24
436	202305231737	202305231833	
437	202305231744	202305231837	
438	202305231745	202305231839	
439	202305231751	202305231845	
440	202305231752	202305231846	
441	202305231758	202305231851	
442	202305231759	202305231852	
443	202305241852	202305241945	W25
444	202305241853	202305241946	
445	202305241900	202305241952	
446	202305241907	202305241953	
447	202305241908	202305241958	
448	202305241909	202305241959	
449	202305241915	202305242004	
450	202305241916	202305242006	
451	202305301727	202305301825	W26
452	202305301728	202305301826	
453	202305301737	202305301832	
454	202305301742	202305301833	
455	202305301743	202305301838	
456	202305301745	202305301839	

457	202305301753	202305301846	
458	202305301754	202305301847	
459	202305311922	202305312017	W27
460	202305311923	202305312019	
461	202305311931	202305312024	
462	202305311932	202305312025	
463	202305311939	202305312030	
464	202305311940	202305312032	
465	202305311946	202305312038	
466	202305311947	202305312039	
467	202306011145	202306040953	W28
468	202306011146	202306040958	
469	202306011153	202306040959	
470	202306011154	202306041000	
471	202306011159	202306041006	
472	202306011209	202306041007	
473	202306040919	202306041011	
474	202306040920	202306041012	
475	202306041825	202306041916	W29
476	202306041832	202306041917	
477	202306041833	202306041922	
478	202306041834	202306041928	
479	202306041840	202306041929	
480	202306041846	202306041930	
481	202306041847	202306041935	
482	202306041848	202306041936	
483	202306071522	202306071615	W30
484	202306071523	202306071620	
485	202306071529	202306071621	
486	202306071530	202306071622	
487	202306071536	202306071627	
488	202306071537	202306071628	
489	202306071543	202306071633	
490	202306071544	202306071634	
491	202306081211	202306081301	W31
492	202306081212	202306081303	
493	202306081218	202306081308	
494	202306081224	202306081309	
495	202306081226	202306081314	

496	202306081231	202306081315	
497	202306081232	202306081320	
498	202306081233	202306081321	
499	202306091644	202306091741	W32
500	202306091645	202306091745	
501	202306091652	202306091746	
502	202306091657	202306091748	
503	202306091658	202306091752	
504	202306091704	202306091753	
505	202306091711	202306091758	
506	202306091715	202306091759	
507	202306111416	202306111505	W33
508	202306111417	202306111506	
509	202306111423	202306111511	
510	202306111424	202306111512	
511	202306111430	202306111517	
512	202306111431	202306111518	
513	202306111438	202306111523	
514	202306111441	202306111524	
515	202306131432	202306131525	W34
516	202306131437	202306131526	
517	202306131439	202306131533	
518	202306131445	202306131538	
519	202306131446	202306131539	
520	202306131447	202306131540	
521	202306131452	202306131545	
522	202306131453	202306131547	
523	202306151019	202306151112	W35
524	202306151020	202306151113	
525	202306151026	202306151120	
526	202306151034	202306151122	
527	202306151036	202306151127	
528	202306151037	202306151128	
529	202306151043	202306151133	
530	202306151044	202306151134	

Table 4: Recordings examples at Figure 3 and Figure 4- Format YYYYMMDDHHMM.

Record number	45 [RPS]	15 [RPS]	Status

1	202302281451	202302281804	Healthy
2	202304091309	202304091416	W1
3	202304091820	202304091915	W2
4	202304101127	202304101254	W3
5	202304101626	202304101719	W4
6	202304101940	202304102103	W5
7	202304131812	202304131959	W6
8	202304161204	202304161305	W7
9	202304161729	202304161830	W8
10	202304181335	202304181419	W9
11	202304191339	202304191435	W10
12	202304191942	202304192035	W11
13	202304201237	202304201337	W12
14	202304231250	202304231343	W13
15	202304231738	202304231828	W14
16	202304232122	202304232209	W15
17	202305011249	202305011342	W16
18	202305012023	202305012112	W17
19	202305021343	202305021442	W18
20	202305031417	202305031518	W19
21	202305071159	202305071305	W20
22	202305071715	202305071810	W21
23	202305101918	202305141010	W22
24	202305141739	202305141816	W23
25	202305231759	202305231852	W24
26	202305241916	202305242006	W25
27	202305301754	202305301847	W26
28	202305311947	202305312039	W27
29	202306040920	202306041012	W28
30	202306041848	202306041936	W29
31	202306071544	202306071634	W30
32	202306081233	202306081321	W31
33	202306091715	202306091759	W32
34	202306111441	202306111524	W33
35	202306131453	202306131547	W34
36	202306151044	202306151134	W35

Table 5: RMS values from the vibration signals.

Record number	RMS at high speed [g]	RMS at low speed [g]	Status
1	1.05	0.19	Healthy
2	1.04	0.19	
3	1.02	0.18	
4	1.06	0.18	
5	1.04	0.18	
6	1.02	0.18	
7	1.02	0.19	
8	1.04	0.28	
9	0.87	0.28	
10	0.87	0.28	
11	0.86	0.28	
12	0.85	0.28	
13	0.87	0.28	
14	0.85	0.28	
15	0.83	0.28	
16	0.81	0.28	
17	0.82	0.20	
18	0.84	0.20	
19	0.81	0.20	
20	0.78	0.20	
21	0.76	0.19	
22	0.75	0.19	
23	0.76	0.19	
24	0.73	0.19	
25	0.84	0.17	
26	0.87	0.18	
27	0.89	0.18	
28	0.92	0.18	
29	0.94	0.18	
30	0.96	0.18	
31	0.96	0.18	
32	0.96	0.18	
33	0.60	0.19	
34	0.61	0.19	
35	0.60	0.18	
36	0.59	0.18	
37	0.59	0.19	
38	0.58	0.19	

39	0.58	0.19	
40	0.58	0.18	
41	0.67	0.18	
42	0.65	0.18	
43	0.65	0.18	
44	0.65	0.18	
45	0.64	0.19	
46	0.65	0.19	
47	0.65	0.19	
48	0.61	0.19	
49	0.61	0.18	
50	0.62	0.18	
51	0.63	0.18	
52	0.63	0.18	
53	0.63	0.18	
54	0.63	0.18	
55	0.64	0.19	
56	0.66	0.19	
57	0.60	0.16	
58	0.59	0.16	
59	0.60	0.16	
60	0.60	0.16	
61	0.59	0.16	
62	0.60	0.16	
63	0.61	0.16	
64	0.62	0.16	
65	0.59	0.16	
66	0.59	0.15	
67	0.60	0.15	
68	0.59	0.15	
69	0.59	0.15	
70	0.59	0.15	
71	0.59	0.15	
72	0.59	0.15	
73	0.51	0.15	
74	0.54	0.15	
75	0.57	0.16	
76	0.56	0.16	
77	0.58	0.16	
78	0.58	0.16	

79	0.58	0.16	
80	0.60	0.16	
81	0.55	0.15	
82	0.55	0.15	
83	0.58	0.15	
84	0.56	0.15	
85	0.58	0.15	
86	0.58	0.15	
87	0.57	0.15	
88	0.59	0.15	
89	0.52	0.15	
90	0.51	0.15	
91	0.52	0.15	
92	0.55	0.15	
93	0.55	0.15	
94	0.54	0.15	
95	0.53	0.15	
96	0.54	0.14	
97	0.64	0.15	
98	0.61	0.15	
99	0.58	0.15	
100	0.57	0.15	
101	0.57	0.16	
102	0.57	0.16	
103	0.58	0.16	
104	0.61	0.16	
105	0.66	0.14	
106	0.65	0.15	
107	0.65	0.15	
108	0.64	0.16	
109	0.63	0.16	
110	0.64	0.16	
111	0.64	0.16	
112	0.62	0.16	
113	0.48	0.13	
114	0.48	0.13	
115	0.43	0.13	
116	0.46	0.13	
117	0.46	0.13	

118	0.45	0.13	
119	0.45	0.13	
120	0.45	0.11	
121	0.50	0.11	
122	0.49	0.12	
123	0.49	0.12	
124	0.49	0.12	
125	0.49	0.12	
126	0.49	0.12	
127	0.48	0.12	
128	0.50	0.11	
129	0.51	0.11	
130	0.51	0.11	
131	0.51	0.12	
132	0.52	0.12	
133	0.50	0.12	
134	0.51	0.12	
135	0.52	0.12	
136	0.52	0.12	
137	0.54	0.15	
138	0.55	0.14	
139	0.57	0.15	
140	0.57	0.15	
141	0.61	0.15	
142	0.59	0.15	
143	0.55	0.14	
144	0.52	0.14	
145	0.54	0.10	
146	0.54	0.12	
147	0.55	0.12	
148	0.53	0.12	
149	0.55	0.12	
150	0.56	0.12	
151	0.56	0.12	
152	0.55	0.12	
153	0.57	0.10	
154	0.58	0.11	
155	0.58	0.12	
156	0.59	0.12	

157	0.58	0.12	
158	0.59	0.12	
159	0.60	0.12	
160	0.60	0.11	
161	0.63	0.11	
162	0.64	0.12	
163	0.62	0.11	
164	0.64	0.11	
165	0.60	0.11	
166	0.61	0.11	
167	0.63	0.11	
168	0.64	0.10	
169	0.65	0.10	
170	0.65	0.11	
171	0.64	0.10	
172	0.64	0.10	
173	0.66	0.10	
174	0.64	0.10	
175	0.65	0.10	
176	0.65	0.11	
177	0.65	0.11	
178	0.66	0.11	
179	0.67	0.11	
180	0.66	0.11	
181	0.65	0.11	
182	0.67	0.11	
183	0.65	0.11	
184	0.64	0.11	
185	0.65	0.11	
186	0.64	0.11	
187	0.66	0.11	
188	0.66	0.11	
189	0.62	0.11	
190	0.65	0.11	
191	0.66	0.11	
192	0.65	0.11	
193	0.64	0.11	
194	0.65	0.11	
195	0.65	0.11	

196	0.64	0.11	
197	0.63	0.11	
198	0.63	0.11	
199	0.64	0.11	
200	0.63	0.11	
201	0.57	0.11	
202	0.58	0.12	
203	0.59	0.11	
204	0.61	0.11	
205	0.62	0.11	
206	0.57	0.11	
207	0.58	0.11	
208	0.59	0.11	
209	0.59	0.11	
210	0.59	0.11	
211	0.61	0.11	
212	0.62	0.11	
213	0.63	0.11	
214	0.64	0.11	
215	0.62	0.11	
216	0.64	0.10	
217	0.65	0.11	
218	0.64	0.11	
219	0.65	0.11	
220	0.65	0.11	
221	0.63	0.10	
222	0.60	0.09	
223	0.59	0.09	
224	0.61	0.10	
225	0.62	0.10	
226	0.62	0.10	
227	0.63	0.11	
228	0.63	0.11	
229	0.63	0.10	
230	0.61	0.11	
231	0.62	0.11	
232	0.60	0.11	
233	0.60	0.11	
234	0.58	0.11	

235	0.59	0.11	
236	0.59	0.11	
237	0.58	0.11	
238	0.58	0.11	
239	0.58	0.11	
240	0.61	0.11	
241	0.60	0.11	
242	0.58	0.11	
243	0.58	0.11	
244	0.59	0.11	
245	0.58	0.11	
246	0.58	0.11	
247	0.57	0.12	
248	0.55	0.11	
249	0.56	0.11	
250	0.55	0.11	
251	0.49	0.11	W1
252	0.51	0.11	
253	0.51	0.11	
254	0.50	0.11	
255	0.51	0.11	
256	0.53	0.11	
257	0.53	0.10	
258	0.52	0.10	
259	0.53	0.14	W2
260	0.53	0.14	
261	0.54	0.14	
262	0.53	0.14	
263	0.55	0.14	
264	0.53	0.14	
265	0.51	0.14	
266	0.51	0.14	
267	0.51	0.16	W3
268	0.50	0.16	
269	0.52	0.15	
270	0.51	0.15	
271	0.53	0.16	
272	0.53	0.16	
273	0.54	0.16	

274	0.53	0.16	
275	0.60	0.17	W4
276	0.61	0.17	
277	0.65	0.17	
278	0.65	0.17	
279	0.62	0.17	
280	0.61	0.17	
281	0.61	0.17	
282	0.60	0.17	
283	0.61	0.19	W5
284	0.62	0.19	
285	0.65	0.18	
286	0.65	0.18	
287	0.60	0.17	
288	0.60	0.17	
289	0.62	0.17	
290	0.62	0.17	
291	0.67	0.19	W6
292	0.65	0.19	
293	0.65	0.19	
294	0.65	0.19	
295	0.64	0.19	
296	0.64	0.19	
297	0.66	0.19	
298	0.67	0.19	
299	0.77	0.21	W7
300	0.78	0.21	
301	0.79	0.20	
302	0.79	0.20	
303	0.79	0.21	
304	0.77	0.21	
305	0.79	0.21	
306	0.80	0.21	
307	0.89	0.24	W8
308	0.91	0.24	
309	0.88	0.24	
310	0.90	0.24	
311	0.89	0.23	
312	0.88	0.23	

313	0.88	0.24	
314	0.89	0.24	
315	0.88	0.25	W9
316	0.87	0.25	
317	0.88	0.25	
318	0.89	0.25	
319	0.87	0.26	
320	0.90	0.25	
321	0.86	0.26	
322	0.86	0.26	
323	0.86	0.25	W10
324	0.86	0.25	
325	0.84	0.25	
326	0.86	0.25	
327	0.82	0.25	
328	0.82	0.25	
329	0.81	0.25	
330	0.82	0.25	
331	0.98	0.30	W11
332	0.97	0.30	
333	0.94	0.30	
334	0.96	0.30	
335	0.93	0.30	
336	0.92	0.30	
337	1.24	0.30	
338	1.21	0.30	
339	1.01	0.27	W12
340	1.06	0.27	
341	1.07	0.28	
342	1.07	0.28	
343	1.04	0.27	
344	1.04	0.28	
345	1.09	0.27	
346	1.08	0.27	
347	1.11	0.37	W13
348	1.11	0.37	
349	1.17	0.36	
350	1.15	0.36	
351	1.13	0.37	

352	1.14	0.36	
353	1.13	0.36	
354	1.12	0.36	
355	1.29	0.41	W14
356	1.28	0.41	
357	1.24	0.40	
358	1.23	0.40	
359	1.21	0.41	
360	1.23	0.40	
361	1.22	0.40	
362	1.23	0.39	
363	1.33	0.46	W15
364	1.30	0.46	
365	1.30	0.45	
366	1.27	0.45	
367	1.24	0.44	
368	1.24	0.44	
369	1.20	0.42	
370	1.19	0.42	
371	1.33	0.44	W16
372	1.32	0.43	
373	1.29	0.43	
374	1.28	0.43	
375	1.27	0.43	
376	1.32	0.43	
377	1.27	0.42	
378	1.27	0.43	
379	1.39	0.47	W17
380	1.37	0.47	
381	1.36	0.49	
382	1.36	0.48	
383	1.28	0.48	
384	1.35	0.48	
385	1.34	0.47	
386	1.34	0.45	
387	1.55	0.47	W18
388	1.54	0.47	
389	1.53	0.46	
390	1.59	0.46	

391	1.52	0.46	
392	1.59	0.45	
393	1.55	0.45	
394	1.57	0.45	
395	1.64	0.49	W19
396	1.63	0.48	
397	1.57	0.48	
398	1.61	0.48	
399	1.58	0.48	
400	1.56	0.47	
401	1.59	0.48	
402	1.58	0.47	
403	1.72	0.56	W20
404	1.71	0.56	
405	1.65	0.55	
406	1.68	0.55	
407	1.72	0.55	
408	1.69	0.56	
409	1.63	0.56	
410	1.61	0.55	
411	1.76	0.58	W21
412	1.74	0.58	
413	1.68	0.56	
414	1.67	0.56	
415	1.67	0.56	
416	1.67	0.56	
417	1.61	0.56	
418	1.63	0.56	
419	1.52	0.55	W22
420	1.54	0.54	
421	1.51	0.54	
422	1.51	0.54	
423	1.50	0.53	
424	1.53	0.53	
425	1.54	0.53	
426	1.56	0.53	
427	1.54	0.57	W23
428	1.54	0.57	
429	1.50	0.55	

430	1.51	0.55	
431	1.48	0.54	
432	1.47	0.55	
433	1.47	0.54	
434	1.52	0.54	
435	1.45	0.60	W24
436	1.45	0.60	
437	1.41	0.60	
438	1.41	0.60	
439	1.42	0.59	
440	1.43	0.59	
441	1.43	0.59	
442	1.42	0.59	
443	1.63	0.57	W25
444	1.61	0.57	
445	1.59	0.59	
446	1.74	0.59	
447	1.71	0.59	
448	1.72	0.59	
449	1.75	0.59	
450	1.77	0.59	
451	2.24	0.59	W26
452	2.24	0.59	
453	2.26	0.63	
454	2.17	0.63	
455	2.20	0.62	
456	2.23	0.62	
457	2.14	0.61	
458	2.15	0.62	
459	1.88	0.64	W27
460	1.90	0.64	
461	1.91	0.65	
462	1.91	0.65	
463	1.84	0.62	
464	1.86	0.62	
465	1.85	0.63	
466	1.85	0.63	
467	2.41	0.62	W28
468	2.41	0.61	

469	2.47	0.61	
470	2.43	0.61	
471	2.34	0.64	
472	2.27	0.64	
473	2.10	0.63	
474	2.10	0.63	
475	2.61	0.56	W29
476	2.32	0.56	
477	2.35	0.60	
478	2.36	0.59	
479	2.07	0.59	
480	2.07	0.59	
481	2.07	0.59	
482	2.09	0.59	
483	1.96	0.53	W30
484	1.91	0.57	
485	1.80	0.57	
486	1.78	0.57	
487	1.82	0.56	
488	1.81	0.56	
489	1.77	0.55	
490	1.75	0.55	
491	2.16	0.54	W31
492	2.17	0.54	
493	2.02	0.58	
494	1.95	0.58	
495	1.98	0.56	
496	2.01	0.56	
497	2.01	0.55	
498	1.97	0.55	
499	2.18	0.62	W32
500	2.11	0.62	
501	1.95	0.61	
502	1.90	0.61	
503	1.95	0.60	
504	1.85	0.60	
505	1.92	0.59	
506	1.99	0.59	
507	2.04	0.72	W33

508	2.06	0.71	
509	1.95	0.74	
510	1.97	0.73	
511	1.86	0.73	
512	1.89	0.72	
513	1.78	0.71	
514	1.83	0.71	
515	1.88	0.86	W34
516	1.73	0.86	
517	1.74	0.89	
518	1.71	0.83	
519	1.72	0.83	
520	1.71	0.83	
521	1.79	0.86	
522	1.79	0.86	
523	1.55	0.77	W35
524	1.58	0.77	
525	1.48	0.75	
526	1.48	0.75	
527	1.49	0.74	
528	1.47	0.75	
529	1.45	0.74	
530	1.48	0.74	

Table 6: Normalized Frequency Modulation Energy (FME) from the vibration spectrum.

Record number	Normalized FME at high speed	Normalized FME at low speed	Status
1	33.2	62.0	Healthy
2	33.8	64.6	
3	33.0	61.1	
4	37.6	59.2	
5	35.0	58.6	
6	33.9	57.8	
7	35.8	55.7	
8	35.3	29.5	
9	20.0	28.3	
10	20.5	29.5	
11	23.0	29.3	
12	23.6	32.4	

13	23.8	33.6	
14	24.1	32.7	
15	23.0	32.5	
16	15.2	34.2	
17	18.8	31.6	
18	20.0	31.6	
19	23.9	30.2	
20	21.8	29.7	
21	25.2	27.2	
22	26.5	28.5	
23	26.0	28.4	
24	25.7	29.1	
25	38.7	23.2	
26	37.3	26.3	
27	38.0	28.6	
28	35.5	29.1	
29	37.2	30.8	
30	37.0	28.7	
31	35.4	29.2	
32	32.2	29.8	
33	10.1	26.7	
34	9.2	26.7	
35	9.3	24.8	
36	9.3	24.4	
37	9.8	25.1	
38	9.7	25.4	
39	10.3	26.5	
40	11.0	23.0	
41	7.8	24.6	
42	7.7	26.1	
43	7.8	26.9	
44	7.6	28.2	
45	8.3	30.4	
46	8.8	31.2	
47	8.0	31.9	
48	7.9	33.3	
49	7.5	29.3	
50	8.3	29.5	
51	9.1	30.7	
52	8.5	31.3	
53	9.2	31.8	

54	8.7	32.9	
55	10.2	34.6	
56	10.5	35.6	
57	8.4	52.2	
58	8.2	45.7	
59	9.0	45.6	
60	9.3	43.5	
61	9.5	43.6	
62	8.8	43.1	
63	9.1	42.4	
64	12.6	18.8	
65	9.9	17.2	
66	9.3	17.2	
67	8.9	15.8	
68	8.0	16.8	
69	8.5	16.3	
70	8.7	15.8	
71	8.7	16.4	
72	8.4	15.8	
73	9.9	17.7	
74	8.8	19.3	
75	9.4	20.4	
76	8.7	20.7	
77	8.7	20.9	
78	9.8	22.1	
79	9.7	21.8	
80	10.3	22.9	
81	14.3	22.9	
82	14.1	21.7	
83	12.4	22.1	
84	13.8	23.8	
85	12.6	22.1	
86	12.3	22.5	
87	12.5	22.5	
88	12.0	23.5	
89	16.5	18.0	
90	16.2	15.8	
91	15.4	17.4	
92	14.2	17.8	
93	14.0	19.0	

94	13.8	18.6	
95	13.9	18.7	
96	14.1	12.2	
97	15.1	13.4	
98	13.6	15.4	
99	13.2	18.5	
100	12.9	22.1	
101	12.5	22.9	
102	13.1	24.0	
103	13.0	23.5	
104	15.2	25.0	
105	15.3	20.1	
106	14.5	22.4	
107	14.4	23.8	
108	13.4	26.4	
109	12.6	28.3	
110	12.7	28.4	
111	13.1	28.2	
112	12.2	29.3	
113	14.6	12.2	
114	14.9	11.8	
115	18.5	11.9	
116	16.9	11.1	
117	17.1	10.7	
118	18.4	10.8	
119	16.8	10.8	
120	16.1	16.0	
121	12.7	14.5	
122	13.3	13.9	
123	13.3	13.3	
124	12.8	13.4	
125	12.7	13.2	
126	13.0	13.2	
127	13.5	13.1	
128	12.6	18.4	
129	12.4	16.9	
130	13.2	15.2	
131	12.3	14.4	
132	12.4	13.5	

133	13.1	13.3	
134	12.1	13.7	
135	11.4	13.8	
136	11.7	13.6	
137	13.3	17.6	
138	12.9	17.0	
139	12.8	18.1	
140	12.5	18.4	
141	11.8	18.9	
142	11.7	18.4	
143	12.0	17.4	
144	15.9	17.5	
145	13.7	20.2	
146	12.8	19.2	
147	12.5	20.7	
148	13.2	21.0	
149	12.4	20.9	
150	11.6	21.5	
151	11.0	21.1	
152	11.2	20.5	
153	14.4	19.7	
154	13.5	18.7	
155	12.0	20.2	
156	10.7	20.3	
157	10.7	19.4	
158	10.0	18.7	
159	9.7	19.4	
160	10.1	18.1	
161	10.1	18.0	
162	9.6	18.0	
163	9.4	20.2	
164	9.5	18.2	
165	9.1	17.5	
166	8.6	17.3	
167	7.9	17.5	
168	8.1	23.3	
169	8.4	21.5	
170	8.3	19.9	
171	7.9	25.8	

172	8.1	23.6	
173	8.5	24.6	
174	7.2	22.0	
175	7.8	21.2	
176	7.4	21.7	
177	7.6	20.9	
178	8.5	19.9	
179	8.0	19.6	
180	7.8	19.6	
181	6.0	18.4	
182	7.1	18.0	
183	7.3	18.6	
184	6.9	18.6	
185	6.1	18.0	
186	5.7	19.0	
187	6.5	18.6	
188	6.4	18.5	
189	5.1	17.9	
190	5.7	17.9	
191	5.8	20.1	
192	6.1	19.4	
193	6.0	19.1	
194	5.9	18.4	
195	5.9	21.1	
196	5.4	19.4	
197	4.4	18.8	
198	3.4	18.5	
199	5.0	18.6	
200	5.2	18.3	
201	6.2	18.7	
202	6.1	17.7	
203	6.3	23.4	
204	6.1	19.7	
205	6.2	18.7	
206	8.6	18.1	
207	8.3	20.0	
208	5.9	19.7	
209	6.6	18.2	
210	6.6	17.7	

211	8.2	20.9	
212	7.9	21.7	
213	7.1	19.0	
214	9.1	19.3	
215	7.0	19.1	
216	8.1	23.7	
217	9.3	19.4	
218	9.5	18.9	
219	8.6	19.8	
220	11.4	21.4	
221	9.1	27.1	
222	7.7	29.3	
223	7.9	26.7	
224	7.5	22.3	
225	8.8	24.0	
226	8.3	20.1	
227	9.7	18.9	
228	12.5	18.7	
229	10.8	22.2	
230	7.4	18.5	
231	10.4	17.9	
232	7.5	17.9	
233	11.4	21.4	
234	8.3	18.9	
235	8.1	17.6	
236	9.4	17.6	
237	8.3	16.8	
238	9.6	16.3	
239	9.4	16.7	
240	10.6	16.6	
241	10.8	17.6	
242	9.8	19.8	
243	10.1	16.7	
244	9.2	16.2	
245	10.6	16.0	
246	10.4	15.7	
247	8.8	15.8	
248	9.9	18.1	
249	8.4	16.4	

250	11.2	16.2	
251	22.2	29.0	W1
252	19.8	29.1	
253	19.1	28.8	
254	19.5	28.5	
255	17.6	28.7	
256	19.2	28.5	
257	18.6	29.6	
258	17.8	29.0	
259	21.0	25.8	W2
260	21.0	25.8	
261	21.3	26.3	
262	22.6	26.2	
263	21.0	26.9	
264	21.6	26.3	
265	22.0	26.4	
266	21.8	26.0	
267	20.2	27.2	W3
268	21.6	27.2	
269	21.3	27.0	
270	22.2	26.9	
271	19.1	27.5	
272	19.0	27.7	
273	20.0	28.9	
274	18.3	28.6	
275	18.3	27.1	W4
276	18.0	27.6	
277	16.2	26.7	
278	16.3	26.3	
279	18.0	26.8	
280	17.9	26.7	
281	16.4	26.4	
282	15.6	26.3	
283	24.5	35.7	W5
284	24.0	34.8	
285	22.2	32.9	
286	21.7	32.4	
287	20.9	31.4	
288	20.3	31.2	

289	19.1	31.1	
290	18.8	31.0	
291	20.4	35.2	W6
292	20.4	35.8	
293	20.5	36.3	
294	20.1	35.9	
295	20.1	35.3	
296	19.8	36.6	
297	19.4	35.6	
298	19.6	37.4	
299	26.2	43.8	W7
300	26.5	43.0	
301	24.8	41.6	
302	22.2	41.9	
303	24.2	43.5	
304	22.5	43.5	
305	22.8	44.0	
306	22.9	44.3	
307	46.8	59.9	W8
308	48.1	59.7	
309	43.1	57.3	
310	45.9	57.0	
311	45.5	55.3	
312	46.4	54.5	
313	43.0	55.6	
314	48.3	55.0	
315	71.7	64.7	W9
316	76.7	62.0	
317	87.8	62.7	
318	88.8	62.5	
319	88.0	63.2	
320	90.7	61.7	
321	84.2	64.3	
322	82.4	63.5	
323	145.0	60.7	W10
324	146.0	59.9	
325	149.0	59.4	
326	160.0	59.5	
327	146.0	61.4	

328	159.0	60.6	
329	153.0	60.4	
330	160.0	60.2	
331	214.0	146.0	W11
332	190.0	145.0	
333	154.0	132.0	
334	210.0	132.0	
335	180.0	156.0	
336	178.0	161.0	
337	341.0	156.0	
338	346.0	158.0	
339	130.0	87.3	W12
340	326.0	86.2	
341	329.0	101.0	
342	342.0	99.9	
343	306.0	96.7	
344	304.0	97.7	
345	381.0	94.3	
346	386.0	93.8	
347	281.0	169.0	W13
348	277.0	167.0	
349	391.0	157.0	
350	355.0	155.0	
351	409.0	167.0	
352	351.0	158.0	
353	386.0	157.0	
354	342.0	157.0	
355	261.0	182.0	W14
356	251.0	176.0	
357	265.0	172.0	
358	240.0	170.0	
359	297.0	181.0	
360	275.0	178.0	
361	285.0	167.0	
362	259.0	161.0	
363	295.0	269.0	W15
364	259.0	271.0	
365	294.0	269.0	
366	277.0	256.0	

367	250.0	250.0	
368	244.0	246.0	
369	260.0	215.0	
370	238.0	216.0	
371	365.0	223.0	W16
372	354.0	221.0	
373	377.0	217.0	
374	348.0	218.0	
375	357.0	217.0	
376	369.0	217.0	
377	378.0	215.0	
378	347.0	217.0	
379	268.0	289.0	W17
380	259.0	292.0	
381	272.0	350.0	
382	288.0	346.0	
383	240.0	354.0	
384	268.0	344.0	
385	258.0	306.0	
386	253.0	268.0	
387	424.0	272.0	W18
388	443.0	274.0	
389	398.0	268.0	
390	498.0	268.0	
391	455.0	271.0	
392	475.0	269.0	
393	470.0	265.0	
394	456.0	266.0	
395	525.0	258.0	W19
396	483.0	251.0	
397	413.0	252.0	
398	444.0	251.0	
399	446.0	246.0	
400	436.0	247.0	
401	473.0	247.0	
402	475.0	250.0	
403	550.0	302.0	W20
404	513.0	301.0	
405	606.0	297.0	

406	630.0	298.0	
407	668.0	301.0	
408	685.0	302.0	
409	627.0	307.0	
410	607.0	305.0	
411	594.0	309.0	W21
412	584.0	309.0	
413	583.0	290.0	
414	579.0	294.0	
415	609.0	296.0	
416	630.0	297.0	
417	639.0	308.0	
418	672.0	306.0	
419	568.0	305.0	W22
420	606.0	295.0	
421	550.0	295.0	
422	578.0	296.0	
423	535.0	292.0	
424	593.0	295.0	
425	575.0	292.0	
426	616.0	290.0	
427	359.0	341.0	W23
428	390.0	340.0	
429	358.0	324.0	
430	367.0	321.0	
431	399.0	314.0	
432	428.0	316.0	
433	387.0	315.0	
434	435.0	316.0	
435	515.0	327.0	W24
436	523.0	323.0	
437	519.0	332.0	
438	501.0	327.0	
439	599.0	332.0	
440	583.0	329.0	
441	634.0	317.0	
442	633.0	310.0	
443	923.0	600.0	W25
444	906.0	593.0	

445	836.0	590.0	
446	522.0	580.0	
447	516.0	564.0	
448	561.0	571.0	
449	696.0	564.0	
450	669.0	561.0	
451	829.0	518.0	W26
452	838.0	511.0	
453	652.0	538.0	
454	698.0	542.0	
455	789.0	527.0	
456	844.0	532.0	
457	638.0	521.0	
458	635.0	530.0	
459	1160.0	584.0	W27
460	1150.0	577.0	
461	891.0	669.0	
462	896.0	663.0	
463	934.0	556.0	
464	994.0	559.0	
465	959.0	609.0	
466	996.0	612.0	
467	757.0	481.0	W28
468	742.0	459.0	
469	863.0	459.0	
470	875.0	457.0	
471	877.0	481.0	
472	861.0	478.0	
473	546.0	450.0	
474	558.0	455.0	
475	1130.0	395.0	W29
476	1030.0	388.0	
477	1010.0	438.0	
478	1040.0	422.0	
479	884.0	427.0	
480	897.0	426.0	
481	910.0	420.0	
482	947.0	418.0	
483	835.0	354.0	W30

484	835.0	405.0	
485	742.0	401.0	
486	743.0	394.0	
487	654.0	388.0	
488	683.0	389.0	
489	844.0	385.0	
490	860.0	388.0	
491	852.0	410.0	W31
492	886.0	403.0	
493	820.0	454.0	
494	878.0	452.0	
495	973.0	430.0	
496	986.0	425.0	
497	992.0	419.0	
498	996.0	414.0	
499	926.0	439.0	W32
500	884.0	457.0	
501	805.0	452.0	
502	875.0	446.0	
503	899.0	431.0	
504	1070.0	430.0	
505	1130.0	421.0	
506	1310.0	419.0	
507	986.0	615.0	W33
508	1040.0	608.0	
509	769.0	613.0	
510	808.0	606.0	
511	888.0	607.0	
512	905.0	609.0	
513	884.0	586.0	
514	1030.0	588.0	
515	1340.0	1040.0	W34
516	1310.0	1030.0	
517	1410.0	1040.0	
518	1490.0	869.0	
519	1530.0	867.0	
520	1660.0	862.0	
521	1410.0	934.0	
522	1420.0	938.0	

523	290.0	651.0	W35
524	294.0	647.0	
525	323.0	593.0	
526	356.0	579.0	
527	353.0	555.0	
528	409.0	554.0	
529	414.0	546.0	
530	391.0	535.0	

Figures

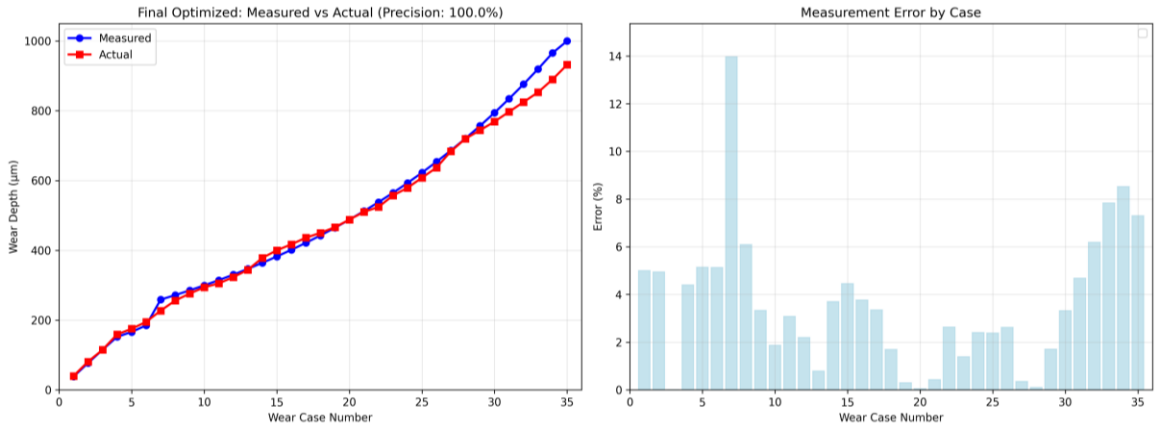

Figure 1: Comparison of wear depth from image processing and actual measurements of tooth 1.

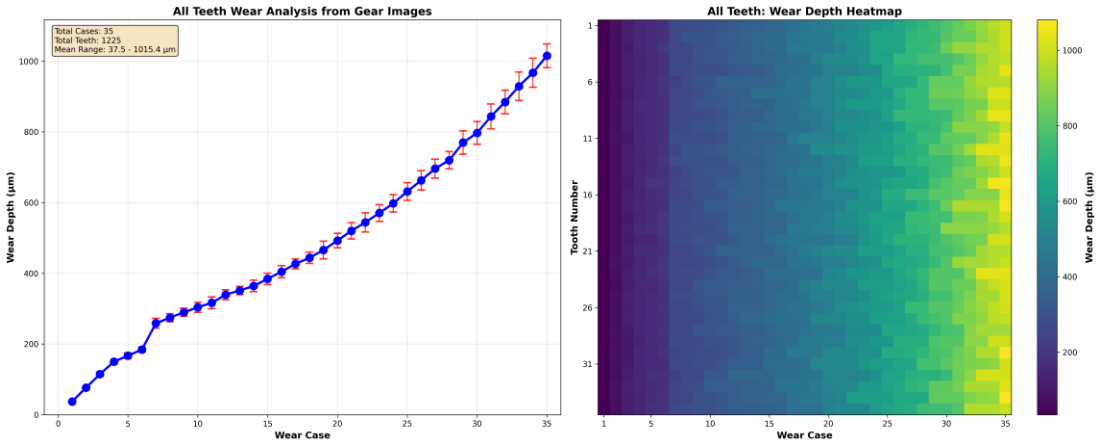

Figure 2: Mean wear depth at all wear cases and heat map for wear growth at all teeth.

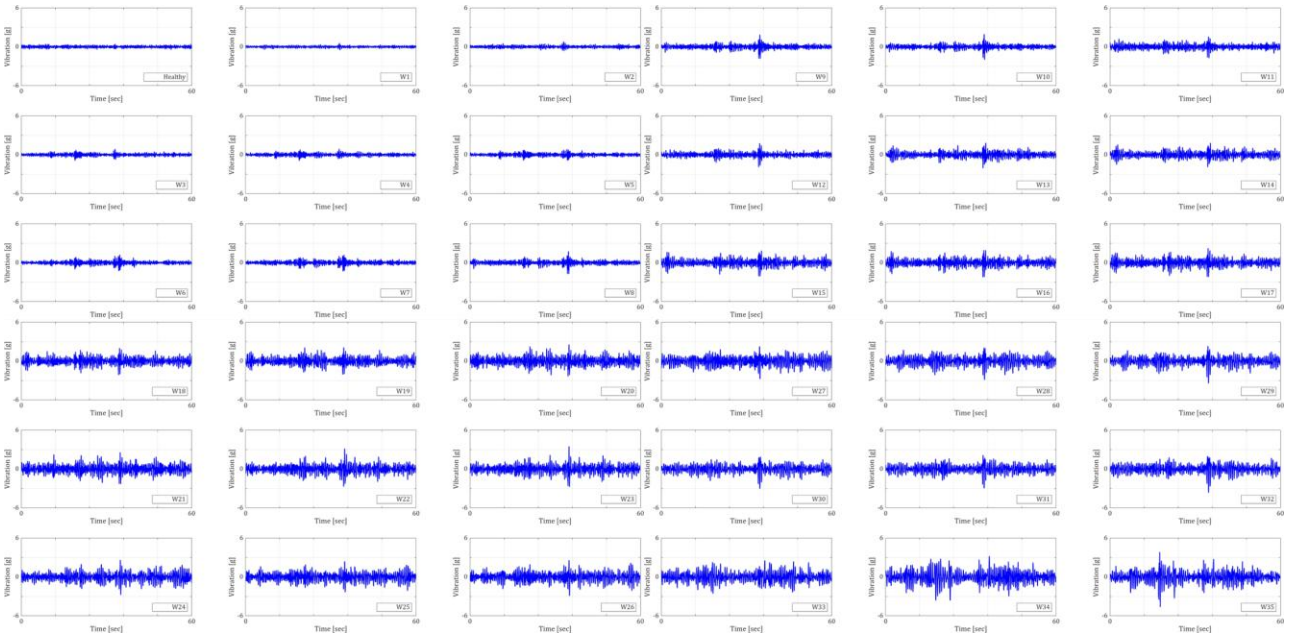

Figure 3: Examples of vibration signals at low speed, the records mentioned at Table 4 .

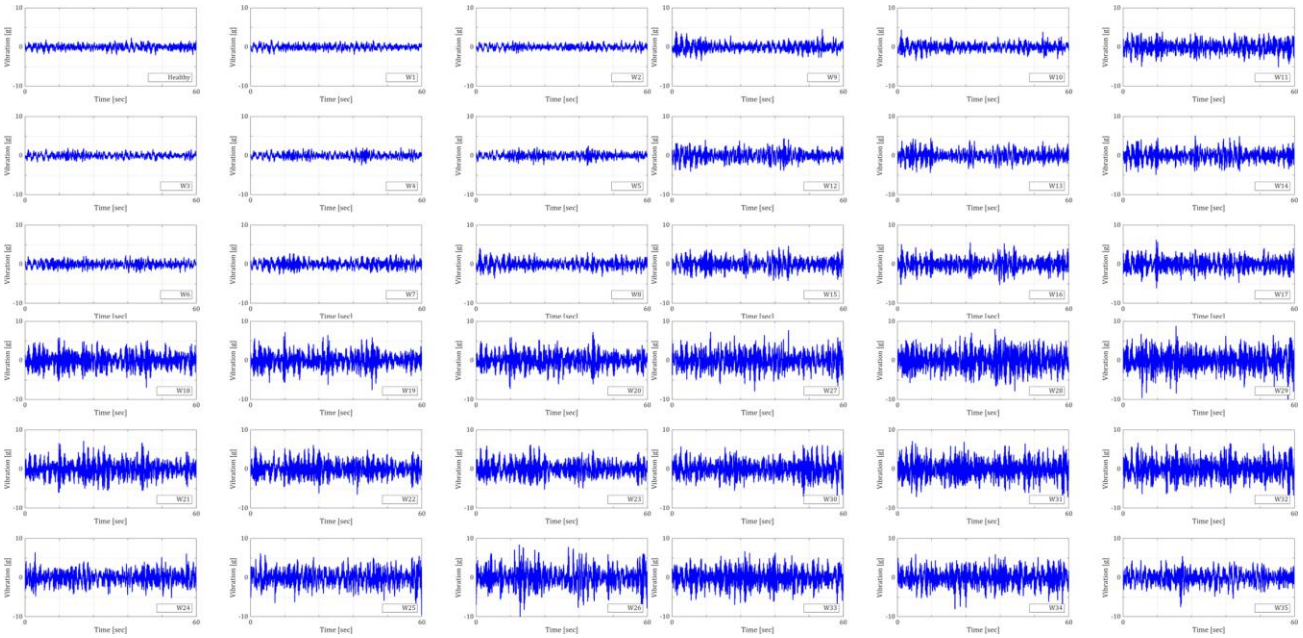

Figure 4: Examples of vibration signals at low speed, the records mentioned at Table 4.