



American
Gear Manufacturers
Association

AGMA 915-2-B20
(Revision of 915-2-A05)

AGMA Information Sheet

Inspection Practices – Part 2: Double Flank Radial Composite Measurements

AGMA 915-2-B20

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**American
Gear
Manufacturers
Association*****Inspection Practices – Part 2: Double Flank Radial Composite Measurements***
AGMA 915-2-B20

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ABSTRACT

This information sheet discusses inspection of cylindrical involute gears using the radial (double flank) composite method, with recommended practices detailed. This information sheet is a supplement to the standard ANSI/AGMA 2015-2.

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Contents

Foreword	v
1 Scope.....	1
2 Normative References	1
3 Symbols and terminology	1
3.1 Symbols	1
3.2 Definitions	4
3.2.1 General	4
3.2.2 ANOVA method	4
3.2.3 Datum axis	4
3.2.4 Double flank contact	5
3.2.5 Double flank eccentricity.....	5
3.2.6 Double flank runout.....	5
3.2.7 Double flank tester	5
3.2.8 Functional tooth thickness	5
3.2.9 Gage R&R.....	5
3.2.10 Master gear.....	5
3.2.11 Master gear test radius	5
3.2.12 Product gear	5
3.2.13 Radial runout.....	6
3.2.14 Process capability	6
3.2.15 Process capability index	6
3.2.16 Process performance index	6
3.2.17 Product gear test radius.....	6
3.2.18 Radial composite deviation over k teeth	6
3.2.19 Radial composite tolerance over k teeth.....	6
3.2.20 Tight mesh center distance.....	6
3.2.21 Tooth-to-tooth radial composite deviation	6
3.2.22 Tooth-to-tooth radial composite tolerance	7
3.2.23 Total radial composite deviation	7
3.2.24 Total radial composite tolerance.....	7
4 Application	7
4.1 General	7
4.2 Measuring principle and interpretation of results.....	8
4.2.1 Measuring principle of a double flank tester	8
4.2.2 Tight mesh center distance.....	10
4.2.3 Test radius	11
4.2.4 Functional tooth thickness	11
4.2.5 Total radial composite deviation	12
4.2.6 Tooth-to-tooth radial composite deviation	12
4.2.7 Total radial composite deviation over k teeth	13
4.2.8 Double flank runout.....	14
4.2.9 Double flank eccentricity.....	15
4.2.10 Higher order Fourier Analysis	16
4.3 Underlying assumptions and limitations	16
4.4 Advantages and disadvantages of double flank inspection.....	17
4.5 Double flank inspection practice	17
4.5.1 General	17
4.5.2 Preset spring force.....	18
4.5.3 Setting the center distance for a specific product gear	18
4.6 Potential causes of backlash and separation during a double flank test.....	22

5	Apparatus	22
5.1	General	22
5.2	Equipment requirements for composite action testing.....	23
5.3	Master gears	24
5.3.1	General	24
5.3.2	Master gear design considerations.....	24
5.3.3	Master gear characteristics requiring calibration	26
6	Statistical techniques for double flank inspection.....	27
7	Measurement system analysis	28
7.1	General	28
7.2	Gage R&R for double flank composite inspection systems.....	28
7.3	Uncertainty analysis for double flank composite inspection systems.....	30
7.3.1	The U_{xx} measurement for uncertainty.....	30

Annexes

Annex A (informative)	Higher order Fourier Analysis	34
Annex B (informative)	Master gear calibration by double flank testing with another master gear.....	36
Annex C (informative)	A case study of statistical techniques during plastic gear development.....	37
Annex D (informative)	A case study of measurement system analysis for double flank testing	46
Annex E	Bibliography.....	52

Tables

Table 1 – Symbols and terminology.....	2
Table 2 – Approximate starting point for setting the preset spring force	18
Table 3 – Common characteristics verified by master gear calibration	27
Table 4 – Statistical coverage factors and student t distribution based on confidence interval	31

Figures

Figure 1 – Radial composite deviation diagram for a 50 tooth gear	7
Figure 2 – General arrangement of a double flank tester	8
Figure 3 – A double flank tester in tight mesh.....	9
Figure 4 – A typical double flank composite test report	10
Figure 5 – Double flank test showing functional tooth thickness	12
Figure 6 –Tooth-to-tooth radial composite deviations as affected by pitch deviations	13
Figure 7 –Tooth-to-tooth radial composite deviations as affected by profile form deviations.....	13
Figure 8 –Tooth-to-tooth radial composite deviations as affected by pressure angle (profile slope) deviations.....	13
Figure 9 – Double flank test showing total radial composite deviation over k teeth	14
Figure 10 – Moving average double flank runout.....	15
Figure 11 – Double flank test showing eccentricity.....	16
Figure 12 – Setting the double flank center distance using gage blocks.....	19
Figure 13 – Setting the center distance using gage blocks	20
Figure 14 – Setting the double flank center distance using a setting disc.....	20
Figure 15 – Setup center distance using a setting disc over the product gear arbor	22

Foreword

[The foreword, footnotes and annexes, if any, in this document are provided for informational purposes only and are not to be construed as a part of AGMA 915-2-B20, *Inspection Practices – Part 2: Double Flank Radial Composite Measurements*.]

AGMA 915-2-A05 replaced AGMA ISO 10064-2, *Cylindrical Gears – Code of Inspection Practice – Part 2: Inspection Related to Radial Composite Deviations, Runout, Tooth Thickness and Backlash*, and the information on similar subjects as covered in AGMA 2000-A88, *Gear Classification and Inspection Handbook – Tolerances and Measuring Methods for Unassembled Spur and Helical Gears*.

The first draft of AGMA 915-2-A06 was made in March 1999. It was approved by the Technical Division Executive Committee (TDEC) in May 2005.

The AGMA 915-2-B20 revision replaces AGMA 915-2-A05 and was approved by the Technical Division Executive Committee (TDEC) on November 26, 2019. The main changes in this new revision include:

- Change of title;
 - OLD - Inspection Practices - Part 2: Cylindrical Gears - Radial Measurements;
 - NEW - Inspection Practices – Part 2: Double Flank Radial Composite Measurements;
- Addition of other types of gears including bevel gears;
- Information on the measurement of double flank runout, eccentricity, functional tooth thickness and higher order Fourier Analysis;
- Design of suitable master gears, statistical measurement techniques related to the use of double flank testers, gage repeatability and reproducibility and uncertainty analysis.

Suggestions for improvement of this information sheet will be welcome. They should be sent to tech@agma.org.

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Inspection Practices – Part 2: Double Flank Radial Composite Measurements

1 Scope

This information sheet constitutes a code of practice dealing with inspection relevant to radial composite deviations of gears when measurements are made by using a master gear in double flank contact.

In providing advice on gear checking methods and the analysis of measurement results, it supplements standard ANSI/AGMA 2015-2.

NOTE: Measurements by using a master gear in single flank contact are not covered by this information sheet. See ANSI/AGMA/ISO 1328-1 [1] and ISO/TR 10064-1 [2], for more information on single flank testing.

2 Normative References

The following documents contain provisions which, through reference in this text, constitute provisions of this information sheet. At the time of publication, the editions indicated were valid. All publications are subject to revision. Users of this information sheet are encouraged to investigate the possibility of applying the most recent editions of the publications listed. Each document is cross referenced in the body of this information sheet to indicate how it applies.

ANSI/AGMA 2015-2-B15, *Accuracy Classification System – Radial Measurements for Cylindrical Gears*

ANSI/AGMA 1012-G05, *Gear Nomenclature, Definition of Terms with Symbols*

ANSI/AGMA 2002-D19, *Tooth Thickness and Backlash Measurement of Cylindrical Involute Gearing*

3 Symbols and terminology

3.1 Symbols

The symbols used in this standard are as shown in Table 1.

NOTE: The symbols and terms contained in this information sheet may vary from those used in other AGMA and ISO standards. Users of this information sheet should assure themselves that they are using these symbols and terms in the manner indicated herein.

The terms used, wherever applicable, conform to ANSI/AGMA 1012, *Gear Nomenclature, Definitions of Terms with Symbols*.