AS/NZS 3584.1:2008

Australian/New Zealand Standard™

Diesel engine systems for underground coal mines

Part 1: Fire protected—Heavy duty

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME-018, Underground Coal Diesel Engine Systems. It was approved on behalf of the Council of Standards Australia on 19 April 2007 and on behalf of the Council of Standards New Zealand on 27 April 2007.
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The following are represented on Committee ME-018:

Australian Institute of Mining and Metallurgy
Australian Chamber of Commerce and Industry
Australian Industry Group
Department of Consumer and Employment Protection (WA)
Department of Labour New Zealand
Department of Mines and Energy (Qld)
Engineers Australia
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Australian/New Zealand Standard™

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Part 1: Fire protected—Heavy duty

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME-018, Mining Equipment, to supersede AS/NZS 3584.1:2005.

The objective of this Standard is to promote the safety of fire-protected diesel engine systems that are used underground in coal mines.

This Standard is one of the following series of the standards:

AS/NZS		
3584	Diesel engine systems for underground coal mines	
3584.1	Part 1:	Fire protected (this Standard)
3584.2	Part 2:	Explosion protected
3584.3	Part 3:	Maintenance

This edition allows for the implementation of new technology in diesel engine systems, including the use of dry exhaust systems, limiting the emission of diesel aerosol particulates and generally reducing the emission of pollutants. This edition facilitates the use of electronically managed diesel engine systems. Its emphasis is to facilitate the implementation of new technology resulting in the increased operational safety of diesel engine systems.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

CONTENTS

Page

SECTION 1 SCOPE AND GENERAL
1.1 SCOPE ... 5
1.2 APPLICATION ... 5
1.3 REFERENCED DOCUMENTS ... 6
1.4 DEFINITIONS ... 7

SECTION 2 DESIGN AND CONSTRUCTION
2.1 DESIGNATED SAFE AREA BARRIER ... 10
2.2 METHANE DETECTION ... 10
2.3 FIRE SUPPRESSION ... 10
2.4 ENGINE TYPES ... 10
2.5 CONDITION MONITORING ... 11
2.6 SURFACE TEMPERATURE ... 11
2.7 ABNORMAL COMBUSTION ... 11
2.8 MATERIALS ... 11
2.9 VEE-PULLEYS ... 11
2.10 ENGINE BREATHER ... 11
2.11 STARTING AIDS ... 12
2.12 FUEL SYSTEMS ... 12
2.13 AIR INLET SYSTEMS ... 12
2.14 AIR COMPRESSORS ... 12
2.15 COOLING SYSTEMS ... 12
2.16 ENGINE SHUTDOWN SYSTEMS ... 13
2.17 EXHAUST ... 15
2.18 ELECTRICAL SYSTEMS ... 19

SECTION 3 MARKING
3.1 COMPLIANCE PLATE ... 20
3.2 WARNING LABELS ... 21

SECTION 4 TESTING
4.1 TYPE TESTING ... 22
4.2 MODIFIED COMPONENTS ... 23
4.3 INSTALLED TESTS BY THE DIESEL ENGINE SYSTEM MANUFACTURER ... 23
4.4 ROUTINE COMMISSIONING TESTS BY THE DIESEL ENGINE SYSTEM MANUFACTURER ... 23
4.5 USE OF LOW EMISSION FUEL ... 24
4.6 MANAGEMENT SYSTEM ... 24

SECTION 5 DOCUMENTATION
5.1 DOCUMENTATION TO BE SUPPLIED ... 25
5.2 GENERAL ARRANGEMENT DRAWINGS ... 26

APPENDICES
A MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS STANDARD ... 29
B DETERMINING LOAD SPEED CHARACTERISTICS ... 30
C DETERMINING CONSTITUENTS OF EXHAUST GAS ... 34
D DETERMINING GASEOUS EMISSION LEVELS ... 40

E DETERMINING DURATION, TEMPERATURE AND FLUID USAGE..... 48
F TESTING ENGINE PROTECTION SYSTEMS 52
G TESTING SPARK ARRESTER COMPONENTS..... 57
H TESTING PARTICULATE FILTER COMPONENTS 59
I SPECIFICATION FOR MEASURING EQUIPMENT..... 60
J SPECIFICATION FOR DIESEL FUEL 62
K SMOKE METER CONVERSION CHART..... 63

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies safety requirements for diesel engine systems that are fire protected for use in designated safe areas in underground coal mines. It applies to diesel engine systems with heavy duty applications. Whether a particular application is heavy duty will need to be determined by the end user and the manufacturer, using risk management processes.

NOTES:

1 Designated safe area is defined in Clause 1.4.3.

2 The Appendices in this Standard are included in a logical sequential order:

(a) Appendix A provides guidance for demonstrating compliance to this Standard.

(b) Appendix B nominates the requirements for determining load-speed characteristics.

(c) Appendix C nominates the requirements for determining the constituents of the exhaust gas.

(d) Appendix D nominates the requirements for determining gaseous emission levels.

(e) Appendix E nominates the requirements for duration testing for temperatures and fluid usage.

(f) Appendix F nominates the test requirements for protection systems.

(g) Appendix G nominates the test requirements for spark arresters.

(h) Appendix H nominates the test requirements for particulate filter components.

(i) Appendix I specifies measuring equipment.

(j) Appendix J specifies diesel fuel used for testing.

(k) Appendix K provides a chart to compare smoke measurements using different units of measure.

3 This Standard addresses abnormal combustion.

1.2 APPLICATION

This Standard is intended for manufacturers, users, regulatory authorities, testing authorities and associated interests. It has no legal authority in its own right, but may acquire legal standing in one or more of the following ways:

(a) Adoption by a regulatory authority.

(b) Reference to compliance with the Standard as a contract requirement.

(c) Claim by a manufacturer or manufacturer's agent of compliance with the Standard.

The requirements of this Standard shall apply to fire-protected diesel engine systems manufactured following the publication date of this Standard. This provision need not apply where a contract for the supply of a fire-protected diesel engine system has been entered into prior to that time.

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