


Laboratory Accreditation Programmes

Schedule to <b>CERTIFICATE OF ACCREDITATION</b>	
<b>Laboratory</b>	New Zealand Leather & Shoe Research Association
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<b>URL</b>	www.lasra.co.nz
<b>Authorised Representative</b>	Mr Peter Roy Senior Technical Officer
<b>Client No.</b>	251
<b>Programme</b>	Mechanical Testing Laboratory
<b>Accreditation Number</b>	578
<b>Initial Accreditation Date</b>	2 October 1995
<b>Conformance Standard</b>	NZS ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories
<b>Testing Services Summary</b>	4.30 Safety Equipment 4.62 Textiles 4.64 Leather and Leather Products
<b>Signatories</b>	Miss Madeleine Adams 4.62, 4.64 (selected) Mr Peter Roy 4.30, 4.62, 4.64

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# CERTIFICATE OF ACCREDITATION

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Accreditation No 578

## 4.30 Safety Equipment

(e) Safety Footwear

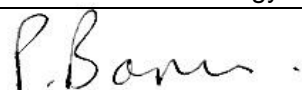
The following tests on Safety Footwear to AS/NZS 2210: 1994 - Part 2

clause 2.2.2	Length of toecap
clause 2.2.3	Toecap edge covering
clause 2.2.4	Toecap flanging
clause 2.2.10	Toecap identification
clause 3.3.2	Protective toecaps
clause 3.3.3	Outsole adhesion
clause 4.3.2	Protective toecaps (Gumboots)
clause 4.3.3	Outsole adhesion (Gumboots)
Section 6	Marking
Appendix A	Impact resistance of protective toecaps
Appendix B	Impact resistance of protective footwear
Appendix C	Crushing resistance of protective footwear
Appendix D	Corrosion resistance of new protective toecaps
Appendix E	Thickness of materials
Appendix F	Sole adhesion
Appendix G	Entry of water
Appendix J	Nail penetration resistance of protective midsoles
Appendix K	Corrosion resistance of steel midsoles

The following tests on Safety Footwear to AS/NZS 2210.2.2000 - Part 2, BS/EN 344:1992 and ISO 8782-1:1998

clause 4.3.1.1	Construction
clause 4.3.1.2	Upper/outsole bond strength
clause 4.3.2.1	General (toe protection)
clause 4.3.2.2	Internal length of toecaps
clause 4.3.2.3.1	Impact resistance of safety footwear
clause 4.3.2.3.2	Impact resistance of protective footwear
clause 4.3.2.4.1	Compression resistance of safety footwear
clause 4.3.2.4.2	Compression resistance of protective footwear
clause 4.3.2.5	Corrosion resistance metal toecaps
clause 4.3.3.1	All penetration-resistance footwear
clause 4.3.3.2	Additional requirements incorporating penetration-resistance inserts
clause 4.3.3.2.1	Construction
clause 4.3.3.2.2	Dimensions
clause 4.3.3.2.3	Corrosion resistance of metal penetration resistance inserts
clause 4.3.5.1	Heat insulation of sole complex
clause 4.3.5.2	Cold insulation of sole complex
clause 4.3.6	Energy absorption of seat region

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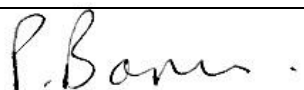
clause 4.3.7	Leak proof footwear (leakproofness)
clause 4.4.1	Thickness – rubber/polymeric (uppers)
clause 4.4.2	Tear strength – coated fabric and textile (uppers)
clause 4.4.3	Tensile strength – rubber/polymeric (uppers) (Tensile properties)
clause 4.4.4	Flexing resistance – polymeric only (uppers)
clause 4.4.5	Water penetration and absorption (uppers)
clause 4.4.6	Water vapour permeability and coefficient (uppers)
clause 4.4.8	Hydrolysis (uppers)
clause 4.5.2	Tear strength (lining coated fabric textile)
clause 4.5.3	Abrasion resistance (linings)
clause 4.5.4	Water vapour permeability and coefficient (linings)
clause 4.6.1	Tear strength (tongue)
clause 4.7.1	Thickness (insoles)
clause 4.7.3	Water absorption and desorption (insoles)
clause 4.7.4	Abrasion resistance (insoles)
clause 4.8.1.1	Cleated area (outsoles)
clause 4.8.1.2	Thickness (outsoles)
clause 4.8.1.3	Cleat height (outsoles)
clause 4.8.2	Thickness of non-cleated outsoles
clause 4.8.3	Tear strength (outsoles)
clause 4.8.4	Abrasion resistance (outsoles)
clause 4.8.5	Flexing resistance (outsoles)
clause 4.8.6	Hydrolysis (outsoles)
clause 4.8.7	Interlayer bond strength (outsoles)
clause 4.8.8	Resistance to hot contact (outsoles)
clause 4.8.9	Resistance to fuel oil (outsoles)
clause 4.8.10	Thread strength (Appendix ZZ AS2210.2:00 only)
clause 4.8.12	Label legibility (Appendix ZZ AS2210.2:00 only)
clause 5.7	Electrical resistance

The following tests on Safety Footwear to AS/NZS 2210.6.2001 - Part 6

clause 4.1	Sampling and conditioning
clause 4.2	Water resistance
clause 4.3.4	Flex resistance of metal penetration resistance inserts
clause 4.5.1	Construction (metatarsal protection)
clause 4.5.2	Impact resistance (metatarsal protection)

The following tests on protective footwear for fire fighters to AS/NZS 4821:2014 and referenced tests

General	
clause 2.2.1	Type and classification Design (Design A excluded) Height of upper

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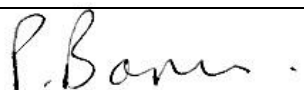
- |                                     |                                 |
|-------------------------------------|---------------------------------|
| Whole Footwear                      |                                 |
| clause 3.5.1                        | Contact heat                    |
| clause 3.13                         | Slip resistance                 |
| clause 3.5.3                        | Flame resistance                |
|                                     |                                 |
| Toe Protection                      |                                 |
| clause 3.7                          | Rigidity of toe at 500 N, mm    |
|                                     |                                 |
| Resistance to Inimical Environments |                                 |
| clause 3.2                          | Laces melting                   |
| clause 3.4                          | Heat resistance test            |
| clause 3.9                          | Chemical resistance             |
| clause 3.10                         | Micro-organism resistance       |
| clause 3.11                         | Zipper                          |
| clause 3.12                         | Eyelet and stud post attachment |
|                                     |                                 |
| Upper                               |                                 |
| clause 3.3.1                        | Thread strength                 |
| clause 3.3.2                        | Thread melting                  |
| clause 3.5.2                        | Radiant heat                    |
| clause 3.5.3                        | Flame resistance                |
|                                     |                                 |
| Outsole                             |                                 |
| clause 3.8.1                        | Cleat design                    |
| clause 3.8.2                        | Cleat height                    |
| clause 3.8.3                        | Breast heel                     |

The following tests on protective footwear for firefighters to BS EN15090:2012 *Footwear for Firefighters* and AS/NZS 4821:2014 *Protective footwear for firefighters – Requirements and test methods (EN 15090:2012, mod)*

- |       |                                     |
|-------|-------------------------------------|
| 5     | Sampling and conditioning           |
| 6.3.1 | Insulation against heat             |
| 6.3.2 | Radiant heat                        |
| 6.3.3 | Flame resistance                    |
| 6.4   | Rigidity of the toepuff             |
| 6.5   | Resistance to chemicals             |
| 6.6.3 | Antistatic footwear                 |
| 6.6.4 | High electrical resistance outsoles |
| 6.7   | Outsole                             |
| 6.8   | Zipper                              |

The following to ASTM F2412:2005 and ASTM F2412:2011 Standard test method for foot protection

- |          |                        |
|----------|------------------------|
| clause 5 | Impact Resistance      |
| clause 6 | Compression Resistance |

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clause 7 Metatarsal Impact Resistance  
 clause 11 Puncture Resistance

The requirements defined in ISO 11999.6 (2016) in accordance with the test methods of:  
 EN 13832.3 (2006) or ISO 20344 (2011) or ISO 20345 (2011) or ISO 6942

6.2.1 Insulation against Heat  
 6.2.2 Radiant Heat  
 6.2.3 Flame Resistance  
 6.3.1 Degradation Resistance  
 6.3.2 Permeation Resistance  
 6.5 Water Resistance  
 6.6.2 Cleat Height  
 6.7.3 Zipper Attachment Strength  
 6.7.3 Zipper Lateral Strength

And the following tests on protective footwear for fire fighters in accordance with  
 ISO 11999.6 (2016)

Test 7.1 Insulation against Heat  
 Test 7.2 Radiant Heat  
 Test 7.3 Flame Resistance  
 Test 7.4.1 Zipper Attachment Strength  
 Test 7.4.2 Zipper Lateral Strength

The following tests on protective footwear to CAN/CSA Z195-14

Clause 5.1.1 Protective toe cap impact resistance  
 Clause 5.2.1 Protective sole penetration test

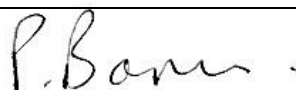
The following tests on protective footwear for fire fighters to prEN ISO 20345:2000, ISO  
 20345:2004/Amd.1:2007 (including referenced tests), ISO 20345:2011 and prEN 20344:2000, ISO  
 20344:2004 and ISO 20344:2011

The following standards are identical.

MS ISO 20345:2008 is identical to ISO 20345:2004  
 SS513 Part 1 is identical to ISO 20345:2004  
 SS513 Part 2 is identical to ISO 20344:2004

Therefore the laboratory's accreditation also includes the above Malaysian and Singaporean  
 Standards for the tests for which the identical ISO Standard above is mentioned

General  
 clause 5.2.1 Height of upper, mm  
 (ISO 20344:2004 clause 6.2.2)  
 clause 5.2.2 Seat region

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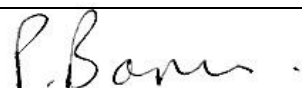
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Whole Footwear clause 5.3.1.1 clause 5.3.1.2  clause 5.3.4  clause 6.2.4  clause 6.2.6   Toe Protection clause 6.2.1  clause 5.3.2.1 clause 5.3.2.2  clause 5.3.2.3  clause 5.3.2.4  clause 5.3.2.5  clause 5.6.2  Resistance to Inimical Environments clause 6.2.3.1  clause 6.2.5  clause 5.3.3   Upper clause 5.4.2	Construction Upper/outsole bond strength (prEN 20344:2000 clause 5) (ISO 20344:2004 clause 5.2) Specific ergonomic features (excluding prEN 20345:2000) ISO 20344:2004 clause 5.1) Energy absorption of seat region (prEN 20344:2000 clause 14) (ISO 20344:2004 clause 5.14) Metatarsal protection (prEN 20344:2000 clause 27) (ISO 20344:2004 clause 5.16)  Penetration resistance (prEN 20344:2000 clause 10.2) (ISO 20344:2004 clause 5.8.2) General Toe cap length, mm (prEN 20344:2000 clause 6) (ISO 20344:2004 clause 5.3) Impact resistance (prEN 20344:2000 clause 7) (ISO 20344:2004 clause 5.4) Compression resistance (prEN 20344:2000 clause 8) (ISO 20344:2004 clause 5.5) Corrosion resistance of metal toecaps (prEN 20344:2000 clause 9.1) (ISO 20344:2004 clause 5.6.1) Resistance of non metallic toecaps (EN 12568)  Heat insulation of sole complex (prEN 20344:2000 clause 12) (ISO 20344:2004 clause 5.12) Water resistance (prEN 20344:2000 clause 26.1) (ISO 20344:2004 clause 5.15.1) Leakproofness (prEN 20344:2000 clause 15) (ISO 20344:2004 clause 5.7)  Thickness (prEN 20344:2000 clause 29) (ISO 20344:2004 clause 6.1)
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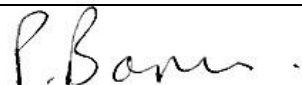
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clause 5.4.3	Tear strength (prEN 20344:2000 clause 30) (ISO 20344:2004 clause 6.3)
clause 5.4.4	Tensile properties (prEN 20344:2000 clause 31) (ISO 20344:2004 clause 6.4)
clause 5.4.5	Flexing resistance (prEN 20344:2000 clause 32) ISO 20344:2004 clause 6.5)
clause 5.4.6	Water vapour Class 1 only (prEN 20344:2000 clause 17 & 19) (ISO 20344:2004 clause 6.6 & 6.8)
clause 5.4.8	Hydrolysis (prEN 20344:2000 clause 34) (ISO 20344:2004 clause 6.10)
clause 6.3.1	Water penetration (prEN 20344:2000 clause 16) (ISO 20344:2004 clause 6.13)
clause 6.3.2	Upper construction
<b>Vamp lining &amp; Quarter lining</b>	
clause 5.5.1	Tear strength (prEN 20344:2000 clause 30) (ISO 20344:2004 clause 6.3)
clause 5.5.2	Abrasion resistance (prEN 20344:2000 clause 20) (ISO 20344:2004 clause 6.12)
clause 5.5.3	Water vapour (prEN 20344:2000 clause 17 & 19) (ISO 20344:2004 clause 6.6 & 6.8)
<b>Tongue</b>	
clause 5.6.1	Tear strength (prEN 20344:2000 clause 30.1) (ISO 20344:2004 clause 6.3)
<b>Insole</b>	
clause 5.7.1	Thickness (prEN 20344: 2000 clause 35) (ISO 20344:2004 clause 7.1)
clause 5.7.3	Water absorption
clause 5.7.4	Abrasion resistance (prEN 20344:2000 clause 22) (ISO 20344:2004 clause 7.3)
<b>Outsole</b>	
clause 5.8.1	Thickness (prEN 20344:2000 clause 36)

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- clause 5.8.2 (ISO 20344:2004 clause 8.1)  
Tear strength  
(prEN 20344:2000 clause 30.2)
- clause 5.8.3 (ISO 20344:2004 clause 8.2)  
Abrasion resistance  
(prEN 20344:2000 clause 37)
- clause 5.8.4 (ISO 20344:2004 clause 8.3)  
Flexing resistance  
(prEN 20344:2000 clause 23)
- clause 5.8.5 (ISO 20344:2004 clause 8.4)  
Hydrolysis  
(prEN 20344:2000 clause 34)
- clause 5.8.6 (ISO 20344:2004 clause 8.5)  
Interlayer bond strength  
(prEN 20344:2000 clause 5)
- clause 5.8.7 (ISO 20344:2004 clause 5.2)  
Resistance to fuel oil  
(prEN 20344:2000 clause 25)
- clause 6.4.1 (ISO 20344:2004 clause 8.6)  
Cleated area
- clause 6.4.2 Thickness of cleated outsoles  
(prEN 20344:2000 clause 36)
- clause 6.4.3 (ISO 20344:2004 clause 8.1)  
Cleat height  
(prEN 20344:2000 clause 36)
- clause 6.4.4 (ISO 20344:2004 clause 8.1)  
Resistance to hot contact  
(prEN 20344:2000 clause 24)
- (ISO 20344:2004 clause 8.7)

The following tests on protective clothing for users of hand-held chain saws

- ISO 11393-3:1999 (E) Part 3: Test methods for footwear
- BS EN 381-3:1996 Part 3: Test methods for footwear
- ISO 17249:2013 Resistance to chainsaw cutting

(f) Other safety products

The following tests on Occupational protective gloves to AS/NZS 2161.3:1998  
 Protection against mechanical risk

clause 6.2 Blade cut resistance

The following tests on protective clothing for users of hand-held chain saws

- ISO 11393-2 Part 2: Test Methods and performance requirements for leg protectors  
 – Clause 9.3 Testing of resistance to cutting.

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BS EN 381-2 Part 2: Test Methods for leg protectors – Clause 8 Testing of resistance to cutting.

AS/NZS 4453.2:1997 Part 2: Test Methods for leg protectors – Clause 8 Testing of resistance to cutting.

The following tests to the methods shown:

ISO 7619.1:2004	Hardness of rubber and plastics to Shore A using a Durometer Furniture – Assessment of the ignitability of upholstered furniture Ignition source – Smouldering cigarette Ignition source – Match-flame equivalent Ignition sources – Nominal 160 mL/min gas flame and nominal 350mL/min gas flame
AS/NZS 3744	
Part 1: 1998	
Part 2: 1998	
Part 3: 1998	
BS 5852:2006	Methods of test for assessment of the ignitability of upholstered seating by smouldering and flaming ignition sources

## 4.62 Textiles

Fabrics

(a) Tension tests

ISO 13934-1	Tensile properties of fabrics - maximum force and elongation at maximum force using the strip method
ISO 13934-2	Tensile properties of fabrics - Determination of maximum force using the grab method
ISO 13935-1:2014	Seam tensile properties - Part 1: maximum force to seam rupture Using the strip method
ISO 13935-2:2014	Seam tensile properties - Part 2: maximum force to seam rupture Using the grab method
ISO 13936-2	Slippage resistance of yarns at a seam in woven fabrics - Fixed load method

(b) Tear tests

AS 2001.2.10 Tear resistance of woven textile fabrics by the wing-rip method

(c) Burst tests

ASTM D3787 Bursting Strength—Constant-Rate-of-Traversal (CRT) Ball Burst Test

(d) Wear tests

ISO 12947-1	Abrasion resistance of fabrics - Martindale abrasion testing apparatus
ISO 12947-2	Abrasion resistance of fabrics - Determination of specimen breakdown

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ISO 12947-3 ISO 12947-4 ISO 12945-2	Abrasion resistance of fabrics - Determination of mass loss Abrasion resistance of fabrics – Assessment of appearance change Fabric propensity to surface fuzzing and to pilling - Modified Martindale method
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(e) Other tests

ISO 105-C06:2010 ISO 105-D01:2010 ISO 105-E04 ISO 105-E01 ISO 105-X12 ISO 3801 ISO 7211/1 ISO 12945-1:2000	Colour fastness to domestic and commercial laundering. Colour fastness to drycleaning using perchlorethelyne solvent. Colour fastness to perspiration Colour fastness to water Colour fastness to rubbing Mass per unit length and mass per unit area Construction – Weave diagram only Determination of fabric propensity to surface fuzzing and to pilling – Part 1: Pilling Box method.
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### 4.64 Leather and Leather Products

The following tests to ISO 105-B02:1994(E)

Method 1 to 4      Colour fastness to artificial light: Xenon arc fading lamp test

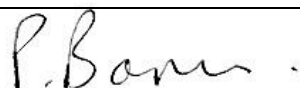
The following tests to ISO 11644:1993(E)

Appendix A      Finish adhesion  
 (also referred to as SLF11)

The following tests to ISO methods listed

ISO 2418 ISO 2419 ISO 2589 ISO 3376 ISO 3377 ISO 3379 ISO 5403:2002 ISO 5402 ISO 11640	Sampling (also referred to as IUP2/SLP2) Conditioning (also referred to as IUP3/SLP3) Thickness (also referred to as IUP4/SLP4) Tensile strength and percent elongation (also referred to as IUP6/SLP6) Measurement of tearing load (also referred to as IUP8/SLP7) Ball burst test Dynamic waterproofness for upper leather (also referred to as IUP10/SLP22) Measurement of the flexing endurance of light leathers and their surface finishes (also referred to as IUP20/SLP14) Colour fastness to cycles of to – and fro rubbing (also referred to as IUF450/SLF470)
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ISO 11642:2012 (IULTCS/IUF 421)                      Colour fastness to water

The following tests to Other methods specified

- |                       |   |
|-----------------------|---|
| AATCC method 8:1989   | Colour fastness to crocking             |
| ASTM D 1813:00        | Thickness of leather                    |
| ASTM D 1516:00        | Width of leather                        |
| ASTM D 1913:00        | Wetting of garment leather (spray-test) |
| ASTM D 2209:00        | Tensile strength                        |
| ASTM D 2208:00        | Breaking strength                       |
| ASTM D 2211:00        | Elongation of leather                   |
| ASTM D 2212:00 (2005) | Slit tear resistance                    |
| ASTM D 2813:86        | Sampling leather                        |
| ASTM D 4704:00        | Tear strength – tongue tear             |
| ASTM D 4705:00        | Stitch tear – double hole               |
| ASTM D 4786:00        | Stitch tear – single hole               |
| ASTM D5053:00         | Colourfast of crocking of leather       |
| SATRA PM36: 1999      | Break/Pipiness                          |

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