

WHITE  
PAPER

# TESTING AND CALIBRATION PERFORMANCE STATISTICS

Sample data collected 2013 - 2015

*Disclaimer:*

*Master Calibrators Australia is an independent research and lobbying entity, and is funded by Mobile Test n Cal International Pty Ltd.*

*This data was taken from random samples of the testing and calibration works carried out by Mobile Test n Cal Australia Pty Ltd during the period of 2013-2015.*

*This data is taken from clients who abide by Electrical Safety Regulation 2002, and performing testing and calibration on a 6 monthly basis. The information in this data does not contain customer data as it was taken from a nameless sample, and therefore does not release any confidential information, however the information in this report itself is confidential and the sole property of Mobile Test n Cal Australia Pty Ltd. This information may not be used for any business or commercial purposes, and is for informational use only.*

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# INTRODUCTION

Master Calibrators Australia has compiled this white paper to help members of the Electrical Industry to better understand the statistical implications of Testing and Calibration frequencies.

The white paper is based on actual failure rates, provided by industry leader Mobile Test 'n' Cal, from equipment being Tested and Calibrated at strict 6 month intervals as per best practice and various industry guidelines, standards and legislations. Statistical non-linear appreciation models have then been used to estimate failure rates if equipment were to be Tested and Calibrated at longer intervals.

The significant safety implication of these statistics, is that all equipment that fails at time of Test or Calibration, has been in use (for an unknown time since it's previous Test or Calibration), in an unsafe state. As such, a longer testing interval and higher failure rate, leads to a higher percentage of unsafe equipment being used in the field by Electrical workers.





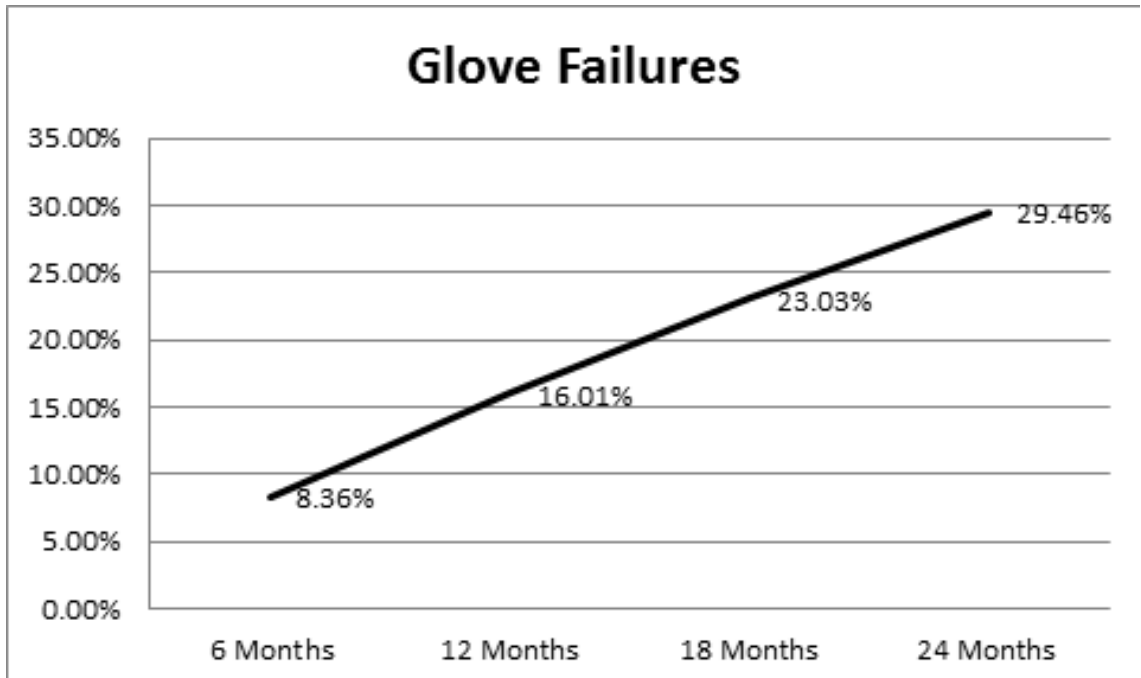
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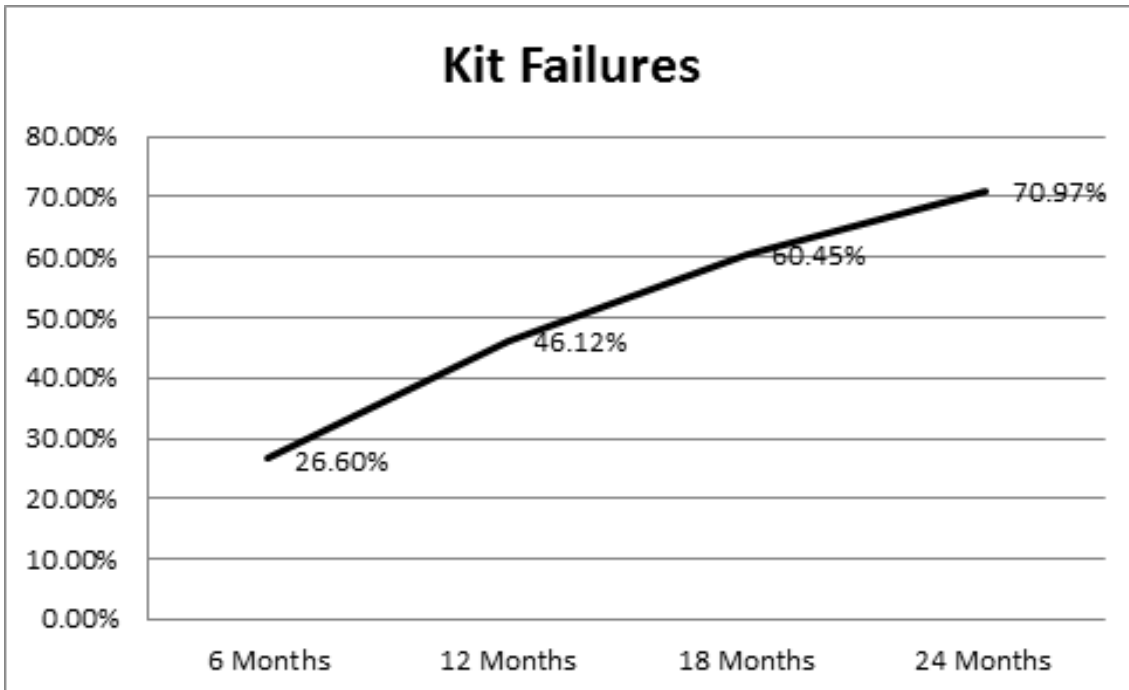
- A - Complete Glove Data
- B - Complete LVR Kit Data
- C - Complete Mat Data
- D - Complete Calibration Data

# PROJECTED GLOVE FAILURES



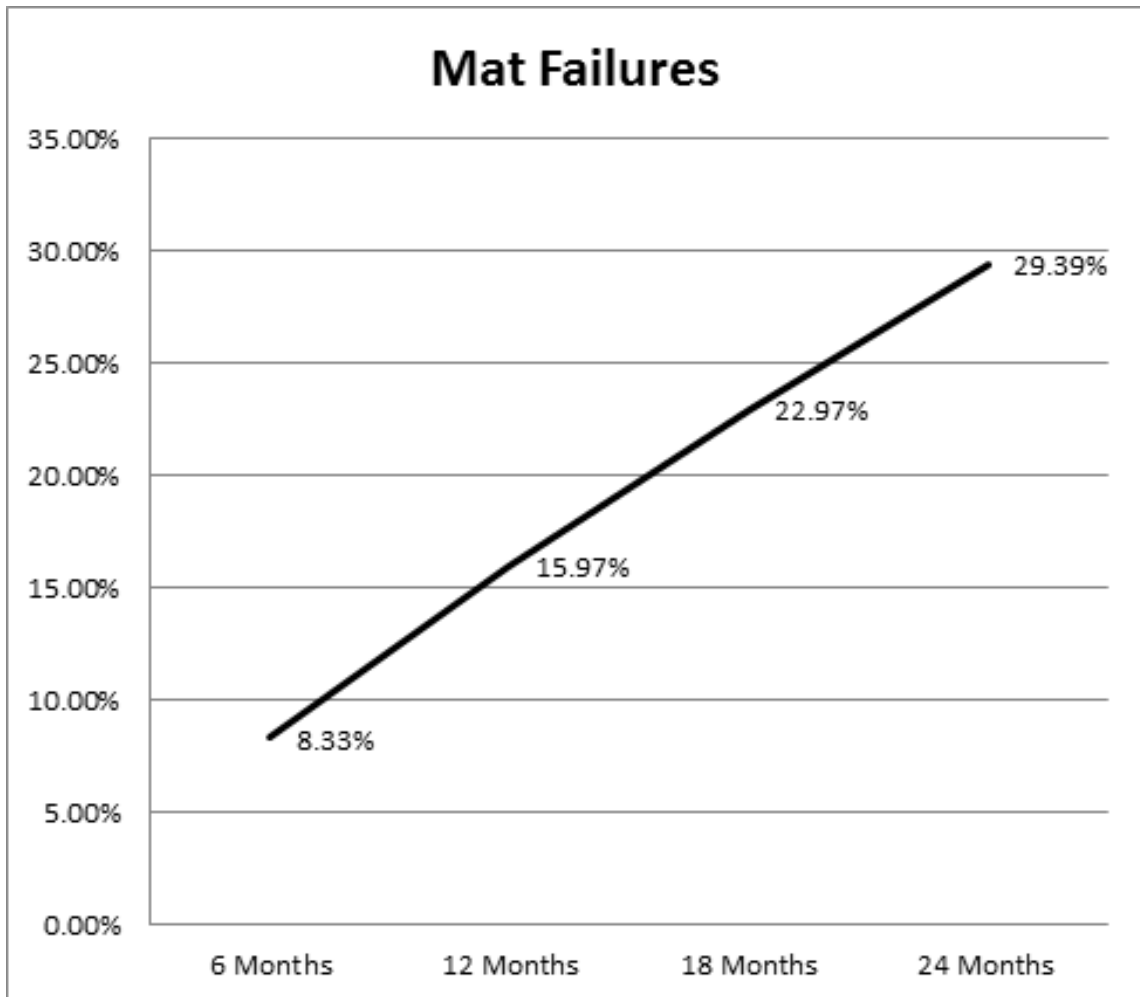
Percentage of gloves tested that are expected to fail if various test intervals are used, using the 6 monthly fail percentage rate of 8.36% found in this study, and a non-linear appreciation model. For a full breakdown of glove failures by brand please see appendix A.

# PROJECTED RESCUE KIT FAILURES



Percentage of kits tested that are expected to fail if various test intervals are used, using the 6 monthly fail percentage rate of 26.6% found in this study, and a non-linear appreciation model. For a full breakdown of kit failures by item please see appendix B.

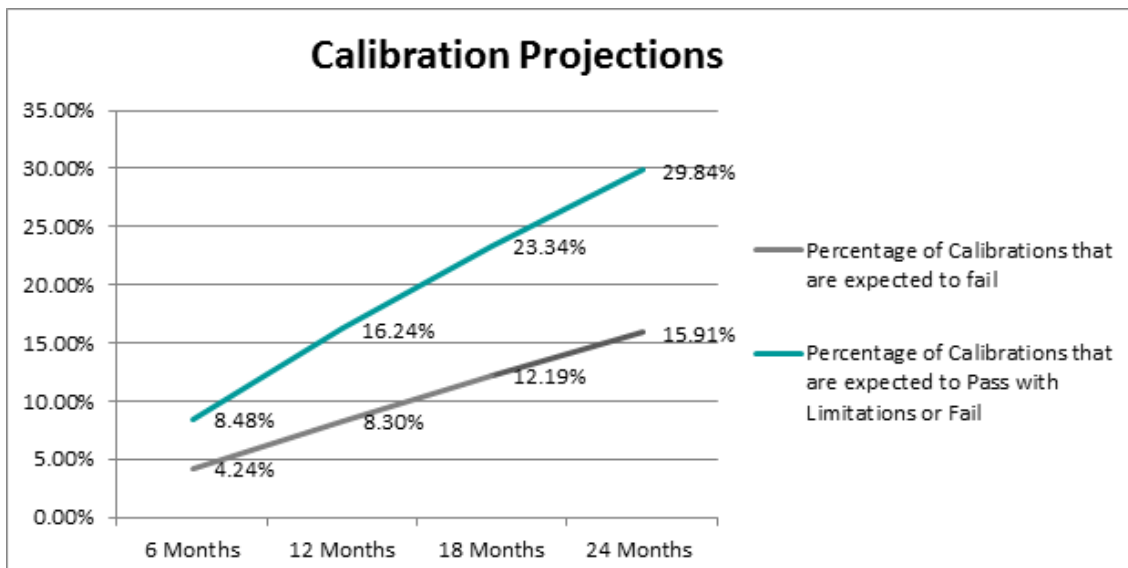
# PROJECTED MAT FAILURES



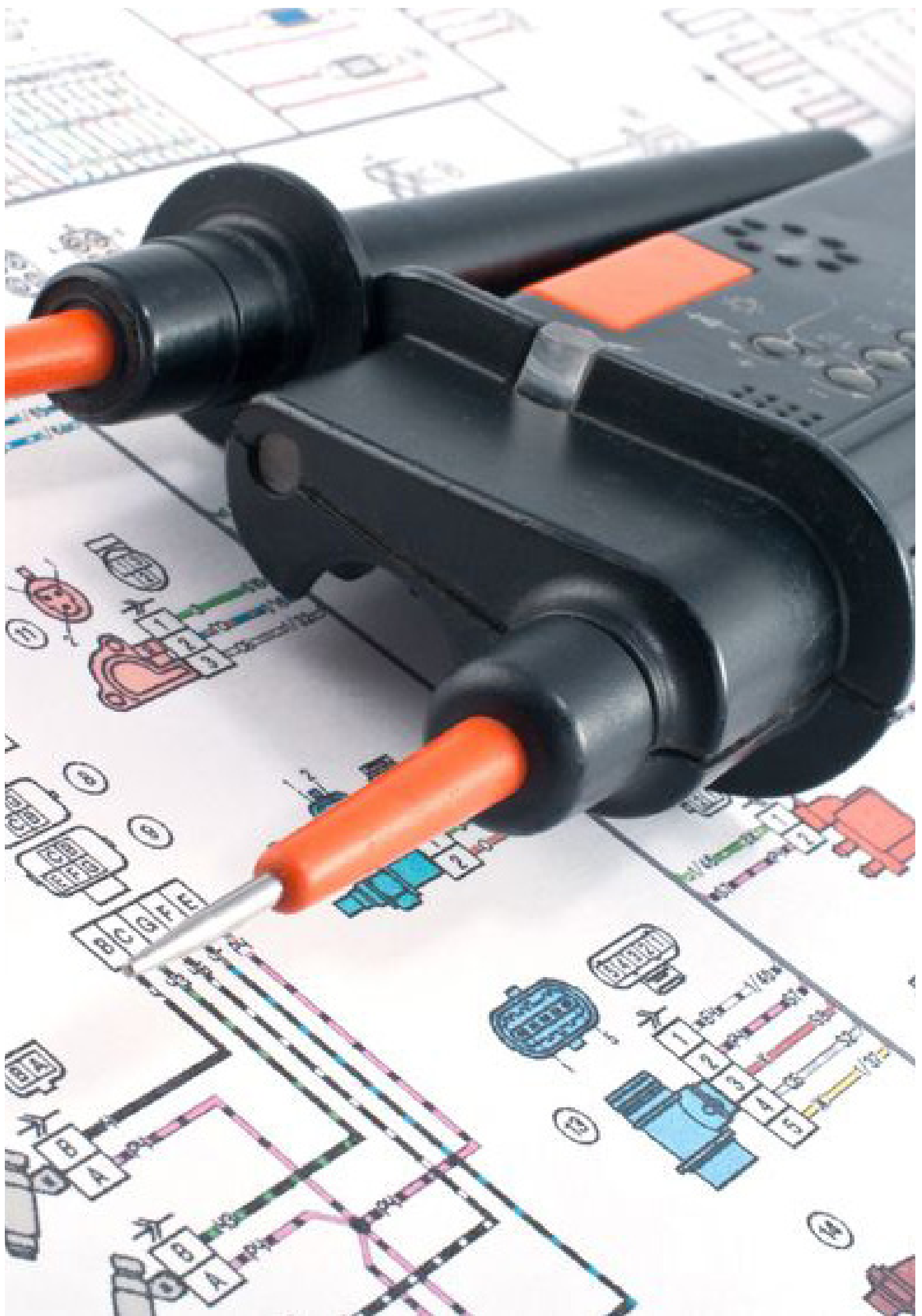
Percentage of mats tested that are expected to fail if various test intervals are used, using the 6 monthly fail percentage rate of 8.33% found in this study, and a non-linear appreciation model. For a full breakdown of mat failures by type please see appendix C.



# PROJECTED CALIBRATION FAILURES

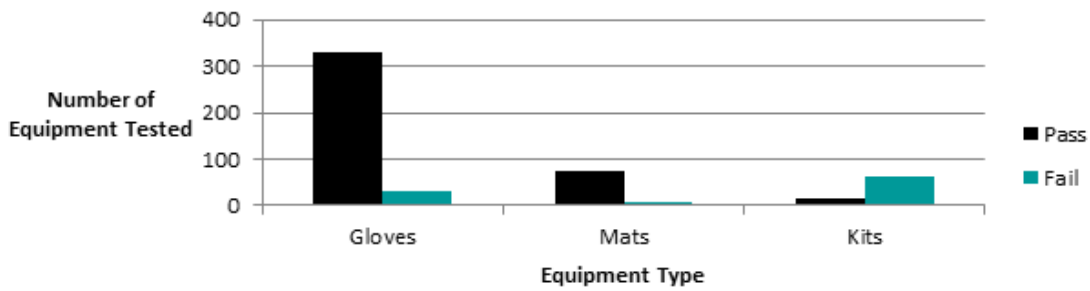


Percentage of Calibrations that are expected to fail or pass with limitations if various test intervals are used, using the fail percentage rate of 4.24% and 8.48% respectively found in this study, and a non-linear appreciation model. For a full breakdown of calibration failures and pass with limitations by brand please see appendix D.

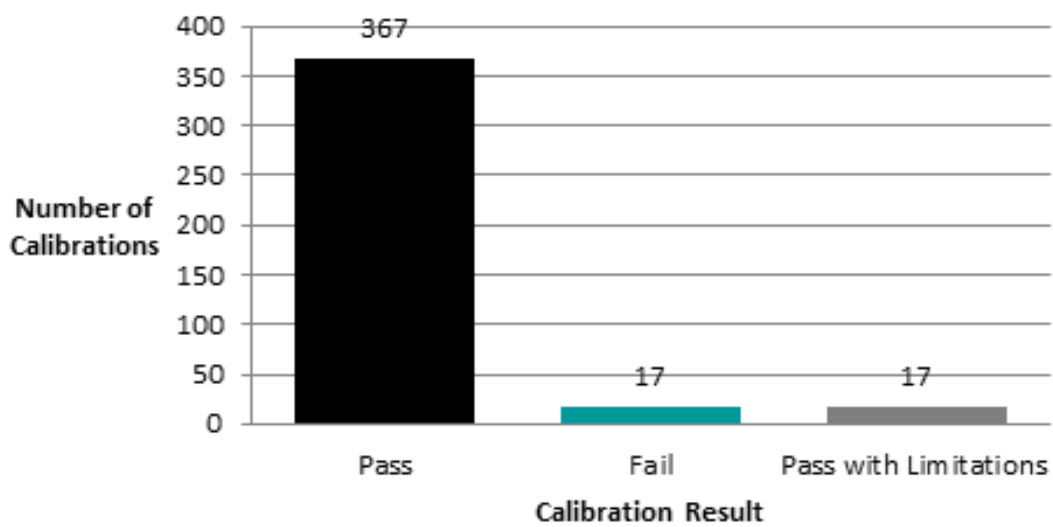


# TOTAL SAMPLE RESULTS SUMMARY

### Total HV Results



### Calibration Results





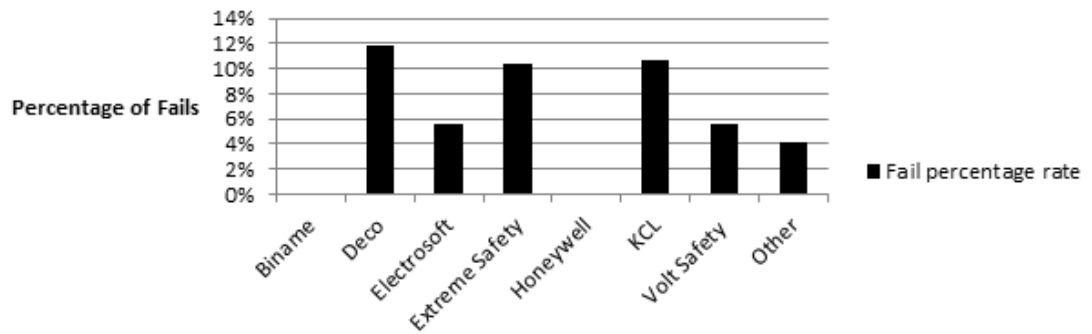
# APPENDIX



## APPENDIX A - COMPLETE GLOVE DATA

Glove Brand	Tested	Pass	Fail	Fail Percentage Rate
<b>Biname</b>	16	16	0	0.00%
<b>Deco</b>	119	105	14	11.76%
<b>Electrosoft</b>	71	67	4	5.63%
<b>Extreme Safety</b>	29	26	3	10.34%
<b>Honeywell</b>	8	8	0	0.00%
<b>KCL</b>	56	50	6	10.71%
<b>VOLT Safety</b>	36	34	2	5.56%
<b>Other</b>	24	23	1	4.17%
<b>TOTAL</b>	<b>429</b>	<b>393</b>	<b>36</b>	<b>8.39%</b>

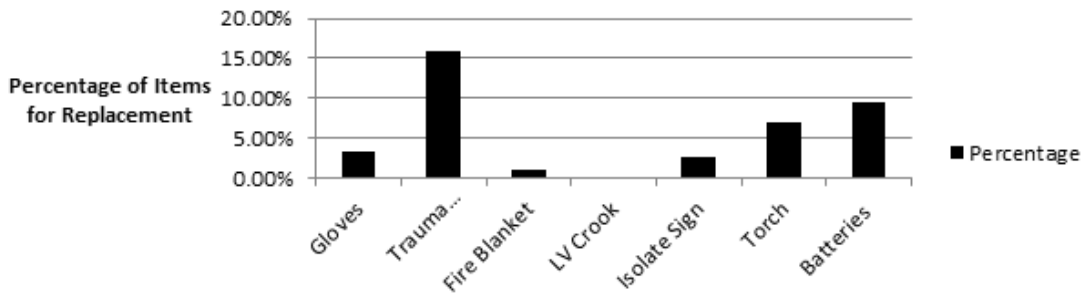
Percentage of Failed HV Gloves



# APPENDIX B - COMPLETE LVR KIT DATA

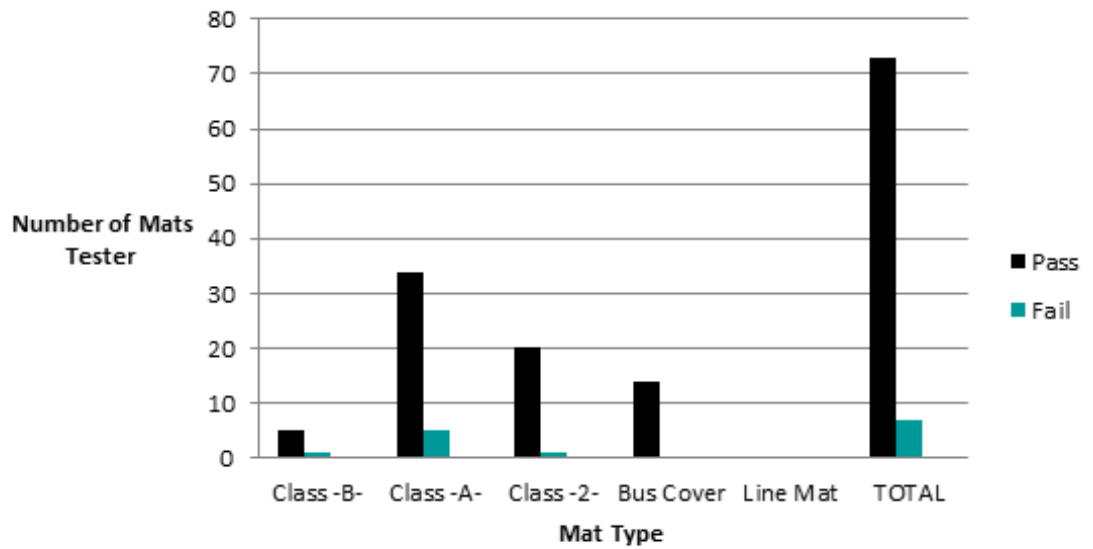
Kit Replacement Items	Tested	Pass	Fail	Fail Percentage Rate
Gloves	188	180	6	3.19%
Trauma Dressing	188	141	30	15.96%
Fire Blanket	188	186	2	1.06%
LV Crook	188	185	0	0.00%
Isolate Sign	188	186	5	2.66%
Torch	188	175	13	6.91%
Batteries	188	164	18	9.57%
<b>TOTAL</b>	<b>188</b>	<b>121</b>	<b>50</b>	<b>26.60%</b>

Percentage of Replacement Items for LVR Kits



## APPENDIX C - COMPLETE MAT DATA

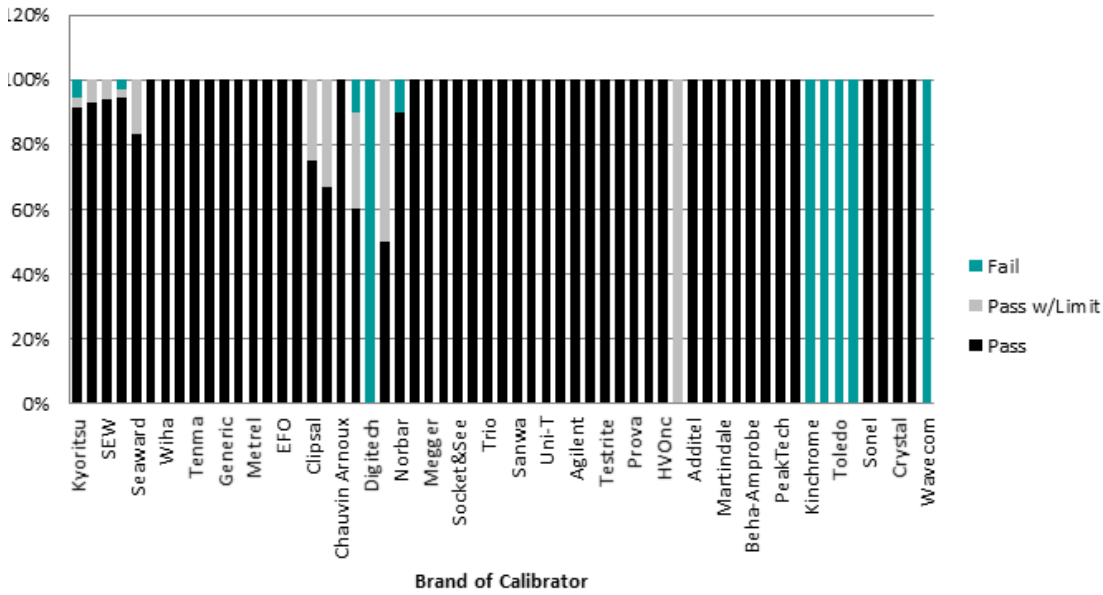
Mats	Tested	Pass	Fail	Fail Percentage Rate
<b>Class -B-</b>	6	5	1	16.67%
<b>Class -A-</b>	39	34	5	12.82%
<b>Class -2-</b>	21	20	1	4.76%
<b>Bus Cover</b>	14	14	0	0.00%
<b>Line Mat</b>	4	0	0	0.00%
<b>TOTAL</b>	<b>84</b>	<b>73</b>	<b>7</b>	<b>8.33%</b>





# APPENDIX D - COMPLETE CALIBRATION DATA

### Calibration Results by Brand



### Calibration Results by Meter Type

