TEST REPORT:

Report of Testing of
Spectacle Model WorkSafe Retro

REPORT TO:

PDS International, Pte Ltd
10 Pandan Crescent, #05-03/04 (LL2)
Singapore 128466

ATTENTION:

Mr. Marvin Wan

REPORT DATE:

June 12, 2019

Intertek-PSI
850 Poplar Street
Pittsburgh, PA 15220

Tel +1 412-922-4000
Fax +1 412-922-4043
intertek.com/building

REPORT TO:	PDS International, Pte Ltd 10 Pandan Crescent, #05-03/04 (LL2) Singapore 128466	**PROJECT:**	Testing of Spectacle Model WorkSafe Retro
ATTENTION:	Mr. Marvin Wan	**PSI PROJECT NO.:**	0823734-3
DATE:	June 12, 2019	**PSI LAB NO.:**	SPT-90054(b)

On June 3, 2019, Professional Service Industries, Inc. (PSI) received twenty-five (25) spectacles identified as Model WorkSafe Retro. On June 11, 2019, PSI tested these spectacles in general accordance with the ANSI Z87.1-2015 standard.

Our services for this project were performed in accordance with PSI Proposal No. 823-9047, dated January 4, 2019. The proposal included a proposed scope of services, estimated costs, unit rates, and PSI's General Conditions. Authorization to perform this project was in the form of signed acceptance of the proposal, acknowledged May 7, 2019.

The results contained in this report are related only to the item(s) tested. The pages of this report (including attachments) shall not be reproduced, except in full, without written approval of PSI. All testing was conducted by and under the continuous, direct supervision of Professional Service Industries, Inc.

Spectacle Description: The Model WorkSafe Retro Spectacle is an impact rated spectacle with a two-piece non-plano prescription clear lens housed inside a metal frame with integral side shields.

Final Conclusion: The PDS International, Pte Ltd Model WorkSafe Retro spectacle **Does Comply** with the ANSI Z87.1-2015 standard.

Please contact us should you have any questions concerning this report.

Respectfully submitted,
Professional Service Industries, Inc.

Denis J. Columbare
Technician, Special Test

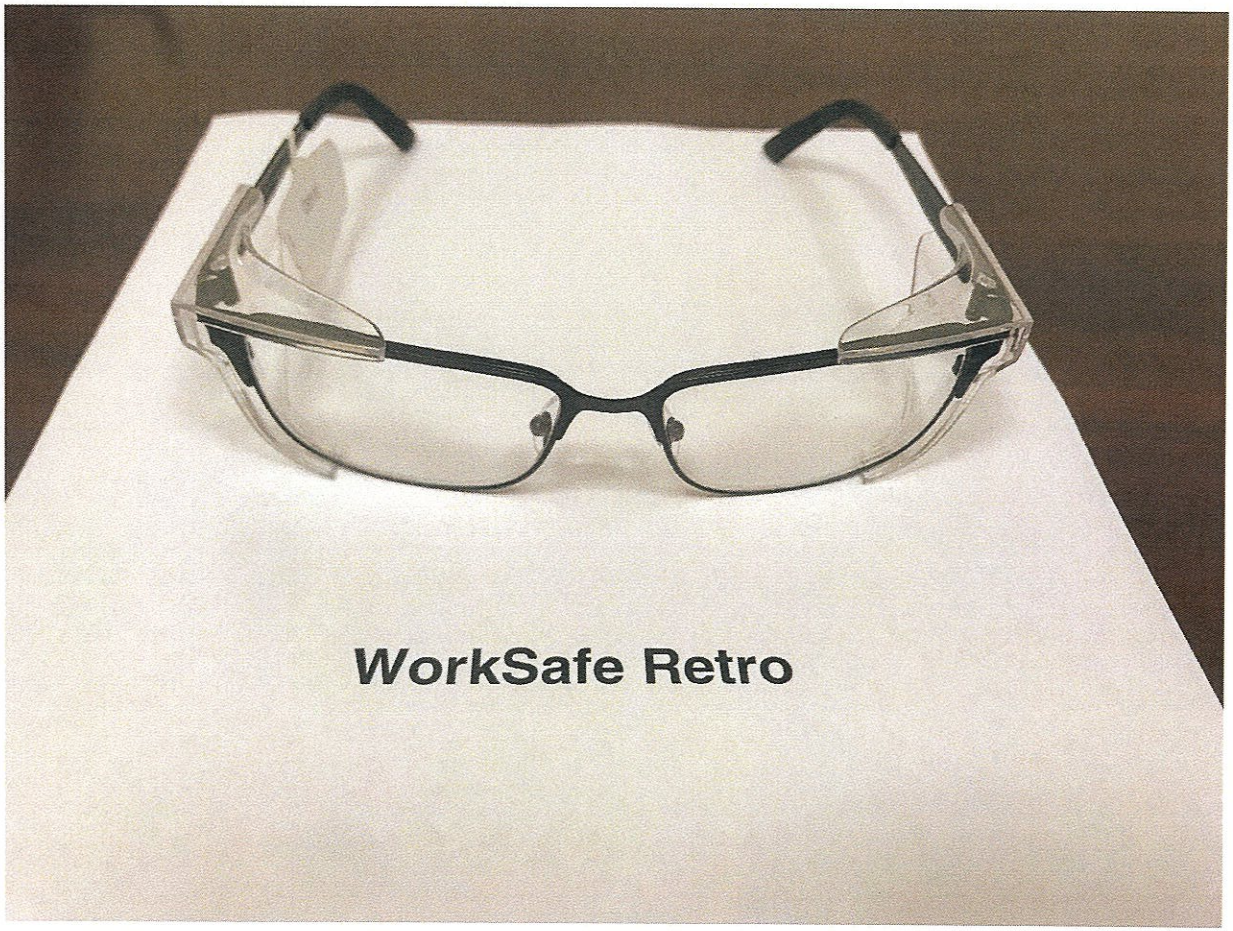
Larry W. Troutman, Jr., CIE
Director/Principal Consultant

REPORT OF SPECTACLE TESTING - GENERAL REQUIREMENTS

Test/Property	ANSI Z87.1 Paragraph	Location	ANSI Z87.1-2015 Requirement	Test Results	Acceptance
Optical Quality	5.1.1/9.1.2		Free of visible defects	Acceptable	Pass
Transmittance, Luminous	5.1.2/9.2.2		85% Minimum (Clear lenses only)	93.1%	Pass
Haze	5.1.3/9.3.2		3% max. (Clear lenses only)	0.90%	Pass
Refractive Power	5.1.4/9.4.3		± 0.06D	0.054 D	Pass
Astigmatism	5.1.4/9.4.3		≤0.06D max.	0.050 D	Pass
Resolving Power	5.1.4/9.4.4		Pattern 20 min.	Pattern 24	Pass
Prismatic Power	5.1.4/9.5.3		≤0.50 Δ	0.125 Δ	Pass
Vertical Prism Imbalance	5.1.4/9.5.3		≤0.25 Δ	0.063 Δ	Pass
Horizontal Prism Imbalance	5.1.4/9.5.3		≤0.25 Δ Base In ≤0.50 Δ Base Out	0.063 Δ Base In	Pass
Drop ball impact	5.2.1/9.6.2		No fracture	Acceptable	Pass
Ignition	5.2.2/9.7.3		Shall not ignite or continue to glow	Acceptable	Pass
Corrosion resistance	5.2.3/9.8.3		Function not impaired	Acceptable	Pass
Minimum Coverage Area	5.2.4	Left, Right	40 mm min. width, 33 mm min. height	Acceptable	Pass
Minimum lens thickness	5.4.4		No minimum requirement for impact rated spectacles – or - ≥3.0 mm	----------	----------
Marking	5.3/Table 3	Frame Front = WZ87-2+ Temples = WZ87-2+ Left Lens = W+U6 Right Lens = W+U6 Scale = U6	Manufacturer and specification compliance	Acceptable	Pass
UV Filter Lenses	Table 7		Max Far UV = 0.01% Max Near UV = 0.1%	Far = 0.008 Near = 0.09	Pass

REPORT OF SPECTACLE TESTING
IMPACT PROTECTOR REQUIREMENTS

Test/Property	ANSI Z87.1 Paragraph	Location	ANSI Z87.1-2015 Requirement	Test Results	Acceptance
Lateral Coverage	6.1.3/9.10.3		Continuous lateral coverage from the vertical plane/10 mm posterior/high/low	Acceptable	Pass
High mass impact	6.2.2/9.11.3	Left 1	No piece fully detached from inner surface, no penetration of rear surface, lens retained.	Acceptable	Pass
		Left 2		Acceptable	Pass
		Right 1		Acceptable	Pass
		Right 2		Acceptable	Pass
High velocity impact	6.2.3/9.12.3	Left 90°	No piece fully detached from inner surface, no penetration of rear surface, lens retained. No contact paste on projectile or device.	Acceptable	Pass
		30°		Acceptable	Pass
		90° 10 mm high		Acceptable	Pass
		Right 90°		Acceptable	Pass
		30°		Acceptable	Pass
		90° 10 mm low		Acceptable	Pass
Penetration	6.2.4/9.13.3		No fracture, no penetration of rear surface, lens retained	Acceptable	Pass


WorkSafe Retro