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September 18, 2002

D/B/A ELF Laboratories
Attn: Mr. Eldon Byrd
RR #1 Box 21
St. Francisville, IL 62460

UL Reference: File MC1651, Project 02NK42174

Subject: Measurement Report for Teslar Watches

Dear Mr. Byrd:

Per your request Project 02NK42174 was opened to perform electromagnetic field measurements on the two Teslar watches you provided.

We attempted to measure the electromagnetic field (10kHz to 30MHz) generated by the watches using a loop sensor and spectrum analyzer however we were unable to detect any measurable fields above the noise floor of our measurement system from either watch.

We were able to measure the magnetic fields created by the watches using a magnetic field meter. Please see Attachment 1 for measurement details. Based on our measurements we concluded there is not a substantial difference in magnetic fields generated by the watches. To summarize:

- The maximum reading taken on the modified watch was 0.37mG
- The maximum reading taken on the unmodified watch was 0.34mG
- The difference in measurements between the same location on each watch was not greater then 0.03mG.

For reference purposes a typical ambient magnetic field is larger then 0.5mG. Our measurements were performed in fully anechoic chamber allowing us to make measurements below 0.5mG.

We are also closing Project 02NK42174 at this time. We wish to thank you for choosing Underwriters Laboratories Inc. as your EMC test source, and we look forward to working with you again in the near future.

If you should have any questions, or if we can be of any further assistance to you, please do not hesitate to contact us.

Best regards,

Bartlomiej Mucha (Ext 41216)
Associate Project Engineer
International EMC Services

Reviewed by:

Jack Steiner
Engineering Group Leader
International EMC Services

Attachment 1

Magnetic Field Measurements Details

The Magnetic Sensor was placed in direct contact with the watch in three different axis with respect to the watch and the six sides of the watch were measured. A total of 18 measurements were taken on each watch. See the tables below for complete results.

Unmodified Watch:

Watch Side Measured	X –Axis (mG)	Y – Axis (mG)	Z – Axis (mG)
Back	0.01	0.37	0.18
Front	0.11	0.33	.019
Left	0.16	0.19	0.11
Right	0.17	0.26	0.11
Top	0.34	0.12	0.11
Bottom	0.34	0.14	0.15

Modified Watch (Red Sticker):

Watch Side Measured	X –Axis (mG)	Y – Axis (mG)	Z – Axis (mG)
Back	0.11	0.34	0.21
Front	0.12	0.35	0.19
Left	0.16	0.18	0.11
Right	0.17	0.25	0.11
Top	0.35	0.12	0.11
Bottom	0.35	0.14	0.16

Measurement Equipment:

Equipment Type	Manufacturer	Model	Range Used	Last Cal.	Next Cal.
ELF Magnetic Field Meter	Holaday	HI-3624A	2mG	10-19-01	10-19-02