Lancer Dispersi ns, Inc.

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Mr. Richard Znidarsic
Chardon Rubber Company
373 Washington Street
Chardon, OH 44024

Dear Dick:

Attached is a brief report that presents the progress we have made as of August 19, 1986, on matching the submitted standards, in 70 and 90 durometer bases, using composite color concentrates. Also, we are pleased to submit panels illustrating the matches we have obtained.

Lancer Dispersions is currently producing composite pigment concentrates. Further we have the technical capabilities of supplying composites or providing formulations made up with single pigment concentrates to match future standards.

If after reviewing this report, should you have any questions as to our capabilities, please do not hesitate to contact me. Thank you for this opportunity to work with Chardon Rubber.

Very truly yours,

Kim Sutter

KS/pk
Encl.
cc: Robert Bahr
Don Sullivan

L = Lighter

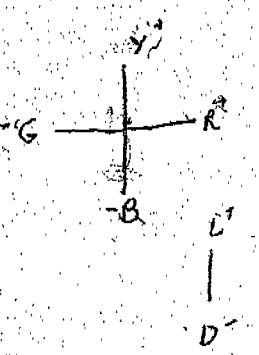
Progress Report - Matching of Nissan Standards for Chardon Rubber

I. Procedure

Work was initiated on matching six standards in 70 and 90 durometer bases. The color matching was done using pigments commonly used for automotive applications and the Lancer test procedure for preparing color concentrates. Let downs were made at 3 parts of concentrate per 100 parts of base. Panels were then prepared on a Carver press and spectrophotometrically compared to the submitted standards. Results are presented for five submittals.

II. Results

Readings were taken on the MacBeth 2000 Spectrophotometer obtaining C.I.E. L*a*b* values with the Northern Skylight (c) illuminant. Results are tabulated as follows:



LR-7483 AG89/70 duro Gray	vs	Max Dark	Max Light	Max Red	Max Yellow
RG	a	-0.1	-0.1	-0.3	0.0
YB	b	-0.2	-0.1	-0.2	-0.4
DL	L	0.7	-0.5	0.4	0.4
	E	0.9	0.6	0.5	0.6

L thru D thru G thru B thru

LR-7482 AG89/90 duro Gray	vs	Max Dark	Max Light	Max Red	Max Yellow
	a	-0.4	-0.3	-0.3	-0.4
	b	0.0	0.0	-0.3	-0.1
	L	0.7	-0.7	0.1	0.2
	E	0.8	0.8	0.4	0.5

LR-7484 AC45/70 duro Brown	vs	Max Dark	Max Light	Max Red	Max Yellow
	a	0.1	-0.3	-0.3	-0.2
	b	0.5	-0.3	0.0	-0.2
	L	0.3	-0.3	-0.1	0.0
	E	0.6	0.5	0.4	0.3

LR-7485 AC45/90 duro Brown	vs	Max Dark	Max Light	Max Red	Max Yellow
	a	0.1	-0.1	-0.3	0.0
	b	0.4	-0.5	-0.2	-0.3
	L	0.3	-0.6	-0.2	-0.2
	E	0.5	0.8	0.4	0.3

LR-7481 PK00/70 duro Gray	vs	Max Dark	Max Light	Max Red	Max Blue
	a	-0.1	-0.1	-0.2	+0.1
	b	0.2	0.1	0.2	0.3
	L	0.7	-0.5	0.0	0.2
	E	0.7	0.6	0.3	0.4

Y thru

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III. Conclusion

The panels and the data presented represent the progress made on this project as of August 19, 1986. Remaining matches will be submitted as developed.

Lancer Dispersions manufactures composite pigment concentrates on a regular basis and will provide Chardon with the technical support needed to develop matches for automotive standards.