FILE NAME: Asbestos in Hair Dryers (HD)

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DOCUMENT DESCRIPTION: Gillette Memo RE Comparison of Coil Failure Rates

D. Norton HD
file HD-12

The Gillette Company
Inter-Office

Date August 28, 1975

Subject Comparison of Coil Failure Rates

From J. C. Johnson

To R. Flynn

cc F. Basegg
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R. Thompso

To the best of my knowledge, no one has answered the question as to how the rate of HD-12 coil failures compares with failure rates demonstrated by other Gillette hair dryers. If the rate of failure is similar to that of the other dryers, it could alter the perspective of the problem.

Comparative coil failure rates for HD-12 and two other dryers are as follows:

Model	% of Field Qty.
HD-12	0.04
HD-7	0.14
HD-5	0.02

These figures represent a ratio of the cumulative number of coil failures after eleven months of returns over the corresponding field quantity. Because of the form of the historical information available, it was necessary to consider "open coils," "shorted coils," and "hair entanglement with open coils" together as one type of failure. In the interest of time, the investigation was limited to these three models.

Mathematical analysis to estimate the probability of failure after 15 months (an approximation of the warranty period used in previous analyses resulted in the following:

Model	P [Failure]
HD-12	0.25%
HD-7	0.74
HD-5	0.16

The relationship among the three models is roughly the same as indicated by the initial comparison. However, the accuracy of these probability estimates is limited by the fact that coil failure frequencies could not be identified with specific lot numbers.

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This analysis does show that HD-12 coil failures are not occurring at an abnormal rate. However, HD-12 coil failures are probably more spectacular since once the open occurs, the loose ends are free to move anywhere in the heater box and short to other coils. The only obvious difference between HD-12 and any other Gillette hair dryer is the absence of heater support cords. This could be the critical difference.

↓ apparently allow the broken element to exit from the unit.
I. M. 9/5/75

JCJ/sdc

John