

exposure is shown to be at a level of 1/3 of the TLV, and corresponds to a "low" dust category.

(c) Laboratory investigation

It is, at first sight, surprising that the exposure to asbestos is as low as found, in view of the quantity of asbestos present in the original material of the brake linings.

Comparison of the fibre proportions in brake lining material and brake drum or air-borne dust (Table 4) shows that in the latter, the percentage of fibres is greatly reduced. The analyses of the brake drum dust samples confirm a very low asbestos content. These findings suggest that during usage, the material undergoes changes in physical and/or chemical form.

Enquiries from research workers in UK and USA indicate that this is a finding which has been observed elsewhere, and current thought is that during braking, high point contact temperatures are reached. As a result, thermal decomposition of chrysotile asbestos takes place, producing an amorphous, non-fibrous magnesium silicate. Under very extreme operating conditions, the binder may decompose and release part of the asbestos as free fibre, but such circumstances would be most unusual.

(d) Conclusions

On the environmental and analytical evidence obtained, it does not appear that a significant hazard to health should occur during brake drum blow-out in a typical Dealer Passenger Car Repair Shop. It would be helpful, however, for

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