

BRAKE LINING REPAIR AND MAINTENANCE PRACTICES HISTORY

To a large extent the changing character of brake lining materials has led to changing work practices and differing asbestos exposures over the years. From 1920 until about 1930, when braking was done through the use of external brake bands made from woven materials, the predominant exposure to asbestos would have come from the cutting and fitting of the woven lining material. Most likely the airborne fiber concentrations were considerably less than those developed in later years when machining of molded materials was common.

From 1927, when internal brake shoes were developed using molded linings, until 1948 when bonded brake linings were introduced, all internal brake linings were attached to shoes using rivets. The lining material for use in the replacement market would be precut to appropriate size for various brakes or obtained from rolls of indeterminate length. The precut segments would usually be predrilled at the factory for rapid mounting on shoes.

In some circumstances, however, drilling for the rivets and bevelling would be done by the mechanic installing them. The use of rolled linings required cutting the friction material to shape, drilling holes for rivets, and bevelling the edges appropriately. Under the latter circumstances, asbestos exposure to workers could be considerable. Even when shoes with predrilled and bevelled linings were installed, the processes of punching out the rivets on the old shoes and riveting on of the new shoes would give rise to greater exposures than that accompanying the use of bonded linings.

With the introduction of bonded lining, the need for drilling, facing, or grinding operations during installation decreased significantly. However,